THIS WEEK'S National Petroleum NEWS

Coming Meetings

Tennessee Oil Men's Association, Peabody Hotel, Memphis, Tenn., Jan. 11. (Changed from Jan. 14).

Northwest Petroleum Association, North Dakota division, Waldorf Hotel, Fargo, N. D., Jan. 11, 12.

Northwest Petroleum Association, Minnesota division, Radisson Hotel, Minneapolis, Minn., Jan. 14, 15.

Oklahoma Petroleum Marketers Association, Oklahoma City, Jan. 21, 22.

Society of Automotive Engineers, Detroit, Mich., Jan. 25 to 29.

South Dakota Independent Oil Men's Association, Carpenter Hotel, Sioux Falls, S. D., Jan. 27, 28.

Wisconsin Petroleum Association, Hotel Pfister, Milwaukee, Jan. 27, 28.

The Kentucky Petroleum Marketers Association, Brown Hotel, Louisville, Ky., Feb. 9.

Iowa Petroleum Association, Fort Des Moines Hotel, Des Moines, Ia., Feb. 9, 10.

Illinois Petroleum Marketers Association, Leland Hotel, Springfield, Ill., Feb. 17, 18.

Ohio Petroleum Marketers Association, Deshler-Wallick Hotel, Columbus, O., Feb. 23, 24, 25.

American Association of Petroleum Geologists, Oklahoma City, Okla., March 17, 18, 19.

Michigan Oil Men's Association, Statler Hotel, Detroit, March 23, 24, 25.

American Chemical Society, New Orleans, La., March 28 to April 1.

American Oil Burner Association, Mechanics Bldg., Boston, Mass., April 11 to 16.

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General

What the Well Dressed 1932 Motor Car Will Ask of the Oil Industry 11
Over 200,000 Bbls. Daily Lopped Off in New Curtailment 15
Merger of Sinclair with Prairie Believed Imminent 17
Indianapolis Jobber Brings Suit Against Chain Store Tax 19
Review of Late Production News 20
200,000,000 Bbls. of Oil Yet to Come from Oklahoma City Pool 22
Violence Threatened in East Texas Testified in Brock-Lee Suit 24
A.P.I. Report of Refinery Operations, Week Ended Jan. 2 49
Gasoline Manufacturers Find Method of Contracting New Grades 74

Merchandising

Selling Batteries at Gasoline Stations—Part 2 38
How One Oil Co. Cut Mileage Costs and Added to Life of Its Autos 41

Engineering

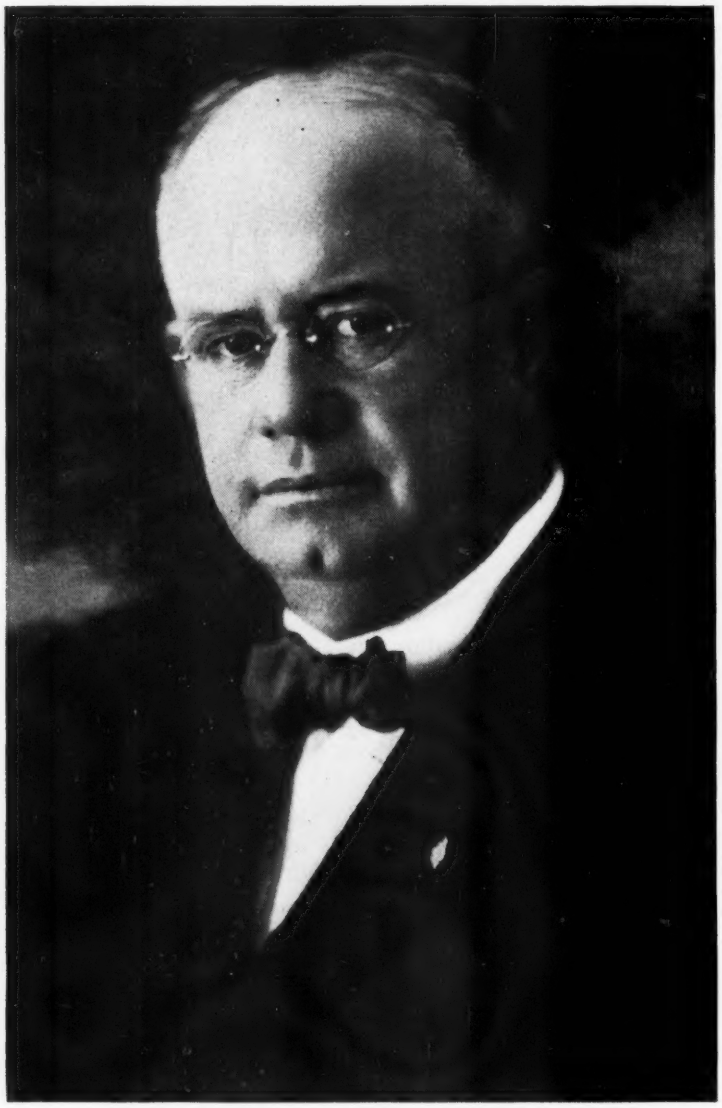
Composition of Greases and Methods of Analyses—*by F. W. Wenzel, Jr.* 25
Visiting Around the Refineries 35
New Refining Patents 36

Markets

Chicago Traders Look for Higher Prices 53
Mid-Continent, Markets Improve at End of Year 55
Refinery Price Tables 56, 58, 59
California, Trading Generally Continues Quiet 62
Pennsylvania, Kerosine Demand Continues Good 63
Eastern, Gasoline Demand Improves 64
Gulf, Cargo Prices Steady 64
Wax, Holiday Quiet Prevails 64
Complete Seaboard Prices 66
Tank Wagon Price Tables 68, 69
Aviation Gasoline Prices 69
Crude Oil Prices, All Fields 71, 73

Departments

The Editors' Viewpoint 13
Visiting Around the Refineries 35
New Refining Patents 36
On the Lazy Bench 65
Oil Company Finance 74, 76, 78, 79



R. A. BROOMFIELD, president Barnsdall Oil Co. of California, first became affiliated with the oil industry in 1901 when he went to Port Arthur, Texas, for James M. Guffey at the time of the Lucas gusher at Spindletop. In 1903 he joined T. N. Barnsdall in organizing the Pittsburg Oil and Gas Co.—a combination of several oil companies and ten natural gas distributing units in Indiana and Ohio.

In 1909 Mr. Broomfield came to California for the Barnsdall interests and was made president of the California subsidiary in 1926. He also holds the position of executive vice-president and director of Barnsdall Oil Corp., the parent organization, and is vice-president and a director of the California Oil Producers Sales Agency and the California Oil and Gas Association.

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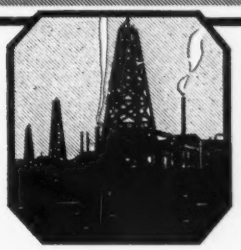

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What the Well Dressed 1932 Motor Car Will Ask of the Oil Industry

By J. C. Chatfield
N. P. N. STAFF WRITER

DETROIT, Jan. 4

WHAT about these new shiny motor cars which will make their bow to the public at the Automobile Show next week at New York?

Have the designers spent recent months thinking up only new variations of the "tear drop" or stream line body, new flares for the fenders, new ways to apply chromium plate or new Duco finishes mixed with fish scales to catch the eye and force buying by a reluctant public?

Has the engineering been limited to new gadgets which even the seasoned motorist cannot contemplate without whipping out his check book and demanding the best possible trade-in value on the old family chariot?

The gadgets are there, of course, simplified gear shifting with the "Wizard Control" and almost universal adoption of free wheeling in one of its three forms. Chromium has disappeared in some places to reappear in others. The windshield tilts more abruptly. Fenders have taken on freakish forms and fish scales add a pearl sheen to Duco.

The automotive engineers, however, have been busy under the hood also. They realize they must step ahead in improvements to stimulate purchases at a time when the average citizen is keeping the flap on his check book pocket buttoned.

Not all this engineering ingenuity has come to a full fruition in the new models. A year from now it may be predicted that all sorts of new things will be tried out on new models being brought out then. But the 1932 models do show the results of intensive study to sharpen the public's desires for new cars.

These things have been done on the straight engineering side, to bring about better performance.

Fuel system plumbing has been rearranged and other things done to prevent vapor lock.

Compression pressures and compression ratios have been stepped up to take advantage of the higher octane gasolines being made by the oil industry.

Combustion chambers have been redesigned to minimize detonation.

Spark plugs have been changed for the same reason.

One designer has adopted an aluminum, carbon-shedding engine head.

A tremendous amount of work has been done in redesigning manifolds.

New exhaust systems also have appeared to complete the work of improving the volumetric efficiency of motors.

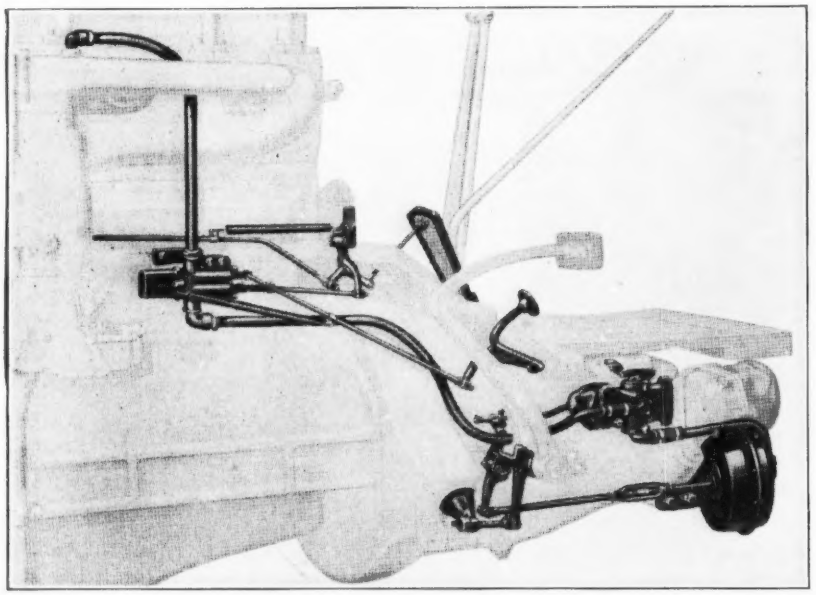
It is common gossip that at least one manufacturer will announce one car with a supercharger.

Something radically new has been done to one motor oil pressure feed system to speed up distribution in a cold motor. The problem of dilution has been attacked also.

Engine speeds have increased.

Principal '32 Auto Shows

New York	Jan. 9-16
Philadelphia	Jan. 18-23
Louisville	Jan. 18-23
Omaha	Jan. 18-23
Pittsburgh	Jan. 23-30
Boston	Jan. 23-30
Chicago	Jan. 30-Feb. 6
Cleveland	Jan. 30-Feb. 6
Detroit	Jan. 30-Feb. 6
St. Louis	Feb. 7-12
Denver	Feb. 8-13
Los Angeles	Feb. 13-20



Plumbing system of the "Wizard Control" new free wheeling device installed in Buick and Cadillac-Lasalle 1932 models. Free wheeling is designed more to simplify gear shifting than to give the economy of "coasting"

Car tonnage is greater.

The list is long and impressive. It cannot be compiled in full until the New York show opens because of the great secrecy which surrounds the preparations and dress rehearsals for the country's automobile shows now going on here in Detroit.

Every motor car manufacturer who had not done so previously, has given thought to vapor lock in his 1932 models. Fuel lines have been moved away from the exhaust, usually being carried outside the chassis frame. Buick has gone further and installed a vented carburetor to prevent vapor from starving the motor on its way through the needle valve. In Buick the gasoline line under the hood has been insulated also, and a scoop has been arranged to bring in cool air from the outside.

Graham last year carried the fuel line on the outside of the frame and this year is spacing the line about a half inch out from the frame and insulating the line past the muffler with an aluminum strip.

Motor car engineers will tell you that preventing vapor lock under extreme summer conditions is not as easy as it might appear on the face or as some of the motor car industry's critics have alleged. A good many things have been tried that would not work and a good many things have been found only partially successful.

Buick can handle successfully a gasoline with a vapor pressure about two pounds Reid greater than a year ago. Others undoubtedly will handle more volatile gasolines, although it is difficult to get the engineers to make a positive statement on the extent of progress—that remains for the motorist to demonstrate next summer.

General opinion is the 1932 automobile will demand a gasoline about four octane numbers higher than the 1931 car. The vast majority of cars heretofore built to operate on "regular" gasolines will operate successfully on the new higher octane regular gasolines. Cars built for premium fuels will continue about as they have, any increase in compression pressures being compensated for by better engine design.

In general it may be said that 80 per cent of the 1932 automobiles will require a 62-65 octane gasoline and 20 per cent a 70-74 octane gasoline. As with all generalities fault may be found with this statement.

The motor car manufacturer as a rule fights shy of approved lists of either motor oils or gasolines. The few who have run afoul of opinion in the oil industry in the past, usually backed up quickly when the shouting began and learned a valuable lesson.

The manufacturer also has been very chary of recommending "an anti-knock fuel such as Ethyl." Packard and a few of the other builders for the "quality trade" have been able to do so. The average manufacturer has built his car for the regular gasoline of the middle west, ignoring the higher octane regular gasolines in other areas.

It is no secret in Detroit that Standard Oil Co. of Indiana's Red Crown gasoline is used largely by automotive engineers in testing motors for detonation. Now that Standard Red Crown has stepped up to about 62 octane in winter, and is expected to be 65 octane in summer, the motor car manufacturers are going along.

The growing boldness of the manufacturer in talking about gasoline is typified by this statement of one:

"We will tell our buyers that our car will operate satisfactorily on the better brands of regular gasoline. We will tell them not to expect good performance on cut-price, unbranded fuels."

The new Chevrolet announced some weeks ago is said to be quite sensitive on 62 octane gasoline and to give better performance on gasoline up to about 68 octane number.

The new Buick with the low compression gasket is said to require about a 68 octane gasoline for good results and about 74 octane for the high compression head.

Graham was built for a minimum octane range of 60-62.

Chrysler's low compression heads are built to operate on 62 octane gasoline and up.

While compression pressures of 1932 cars appear considerably higher than those of 1931 the actual change may not be as great as has been indicated. This is because more accurate instruments have been designed to calibrate pressures. Buick specifications, for example, indicate an increase of about 30-odd pounds in compression pressure at 1000 R. P. M. at an increase of only about 0.5 to 1 in compression ratio.

Graham has made one of the sharpest jumps in compression ratios. Last year its motors were 5.4 to 1 and this year will

(*Continued on page* 14)

THE EDITORS' VIEWPOINT

The Key to Success of the Independents

By Warren C. Platt, Editor

WE HAVE always maintained, from our now 23 years of observation, that the competent Independent petroleum marketer, who operates from a bulk station, is in a stronger position than the bigger companies.

The story of this year in petroleum marketing bears us out, for the big companies have been almost universally losing money in their marketing departments and the smaller companies making money.

The reason is that management is the important factor in marketing, rather than equipment, processes, research laboratories, big crude storage, hundreds of thousands of acres of prospective oil fields, etc., etc., etc. The management has to be right on top of the man who is serving the customer. The further management gets away from that employe the more trouble and cost there is.

It sounds simple enough to set up a marketing department for a big company, but when you go to work out the details of its organization chart, you are amazed at its complexities, and stunned at the immense amount of human and mechanical machinery necessary to supervise, check and recheck, get up costs and keep track of what is going on in regard to every gallon at every pump, a thousand miles away from the home office. If the big company does not set up all this managing machinery, then it has no knowledge of all the evils and errors that are bound to come from human beings, and no knowledge as to how much of its business is profitable and how much is not.

The chain stores have made a success so far from the extreme incompetency and the high operating costs of the small merchants of the past. Your small merchants' volume of business and possible profit was never enough to attract the right kind of men. If they were the right kind they soon quit being small merchants and became big ones, even if they had to move to another city. The oil marketing unit of a bulk station, however, with bulk stations in one or more nearby towns, has been sufficiently large to attract and keep men of ability.

The big oil companies undoubtedly will find some short cuts to better management which will reduce costs but even then one may question if they can get down to the costs of a competently run small marketing business.

Management in distribution is a different problem than management in manufacturing. There you may have 1000 people under one roof, performing operations of such character that each one checks the other, and one man may supervise hundreds. But in distribution you have these thousands scattered over a wide territory, each confronted many times a day with the necessity of exercising his own judgment as to what to do with some detail in the contact with customers. In the factory if a wrong decision is made, at most one has only damaged some material and a new article can be made and the damaged one junked, but in distribution a wrong decision means a loss of the customer, and the cost of making new customers, if one can, is high.

PEOPLE have pointed to the disappearance by purchase of many of the old successful jobbing companies, as indicating that the Independent marketer was passing from the picture due to economic circumstances. An analysis of the real reasons why those companies sold out would indicate the contrary. They sold out because their owners and builders got old and tired and had no son to leave the business to; or they considered the big money offered as better than taking a chance on the son's management; or they let some of their associates have a hand in the business and they ran it into debt; or perhaps even the head himself, growing old, did not keep up with the times and got into financial difficulties. We could give names and dates by the score on all these illustrations.

Then the big companies made such a drive to buy marketing businesses all at once that more were bought in ten years time than young men had opportunity to build up new ones. But the young men are getting to the front now.

The big companies are recognizing this strength of independent management and ownership and many of them in different ways have experimented with farming out to individuals stations and territories. Some losing service stations have been turned into profitable ones by giving them to the operators. Big company officials today are looking over these experiments and scrutinizing their own organizations to see whether this idea could be still further developed or what can be done to reduce the high cost of marketing.

At all events the secret of lower marketing costs will come only through better management.

1932 Cars

(*Continued from page* 12)

be 6.5 to 1. How this has been done and the car kept in the "regular" fuel class is one of the interesting developments of the year.

New Graham cars are equipped with aluminum alloy cylinder heads and specially designed spark plugs. Company engineers have found that the aluminum head has a much higher heat conductivity at high temperatures than old type heads. This feature prevents the head from reaching a temperature which will include preignition.

Another advantage claimed by the makers is that the aluminum head sheds carbon easily. When the car is given a burst of speed for a few miles it is said to automatically clean itself of carbon accumulations. This permits the builders to keep the compression ratio high and not fear for results after the time when carbon deposits might normally be expected.

Most manufacturers have been working with spark plugs in one way or another—the plug being considered one of the villains of the play in causing knocking. The tendency has been in the direction of smaller plugs with less of the porcelain insulator exposed to combustion chamber temperature.

Graham has kept the ¾-inch plug but has threaded its circumference to the end, eliminating the usual unthreaded collar extending into the combustion chamber. It has reduced the length of the center lectrode a few thousandths of an inch.

With its new head, new higher compression and new plugs, Graham has followed motor speed trends by increasing the speed at maximum horsepower rating from 3200 to 3350 r.p.m., has increased its rated horsepower 10 per cent and claims a 5 per cent increase in fuel economy.

Nothing is known definitely about the 1932 Ford, except that it is supposed to be an eight to meet Chevrolet competition, but all of the other low-speed motors of previous years have been stepped up. Chevrolet and Buick, outstanding examples of low speed motors in past years, have stepped up speeds to 3000 r.p.m. and above at maximum horsepower rating.

Possibly the most important work which has been done in connection with the motors for 1932 has been in connection with the flow of air to the motor and in the exhaust system.

Automotive engineers recognized that the power output of a motor depends to a large extent on the amount of air which can be gotten into the cylinders. This involves also the scavenging of the cylinders of burned gases.

This problem has been attacked by freeing the passages, not so much in the way of increasing their size but rather in streamlining the flow to reduce friction and give better distribution.

The 1932 car has a new muffler which takes off virtually all the back-pressure from the motor. The new muffler has had all the baffle plates removed so there is no restriction to the movement of the exhaust gases, except the limited amount of wall friction. Sound is even more effectively deadened with the new mufflers by the application of a sound absorbing substance around the screened muffler tube through which the gases pass.

The lessened restriction on the exhaust and the newly designed intake manifolds increase the volumetric efficiency of motors at high speeds materially. Engine speeds are increased at maximum horsepower rating and brake horsepower is increased by from 10 to 20 per cent.

It is understood a good deal of experimenting is going on with superchargers, to force more air into the cylinders at high engine speeds. One difficulty with this is in producing a supercharger which will not add to engine noise. Rumor has it that one stock car will be equipped with a supercharger this year.

Generally speaking fuel consumption of 1932 models will not be notably less than in previous models. Automotive engineers do not appear concerned on this point. Their opinion is that the motorist wants the comfort given by a larger, heavier car and at the same time demands performance at the traffic light and on the open road. They are giving him comfort and performance and of course, he has to pay for it in foregoing the maximum economy in full consumption.

The higher engine speeds likewise mean high oil consumption, particularly when the motor is run at top speed for long distances.

Bearings are being studied intensively as engine speeds increase. Buick, for example, has found that, by decreasing the thickness of the babbit facing of its bearings a few thousandths of an inch, it has been able to prolong their life tremendously.

Nitriding of steel is not yet a commercial proposition but when it becomes so the motor car manufacturer can add tremendously to motor life. A nitrided steel crankshaft has been run without appreciable wear to the point it has worn out several sets of cylinders.

The development of extreme pressure lubricants and their standardization is a subject of intense current interest to motor car engineers, particularly for the lapping in period. General Motors now tin plates pistons in two of its popular price cars to aid in lapping in. Chrysler services all cars leaving its factories with extreme pressure lubricants in differential and transmission to aid in wearing in the tooth surfaces and give longer quiet life.

Until test methods are standardized and lubricants of the extreme pressure type are available everywhere most manufacturers will not attempt to use hypoid gears.

Except for Packard virtually every 1932 car has one of the three forms of free wheeling. These include the L. G. S. spring clutch type used in Cord, Auburn, Chevrolet and others; the Borg-Warner roller type used by Studebaker, Chrysler, Hupmobile and others; and the new Bendix declutching device which Buick calls the Wizard Control and which is being adopted by other of the higher priced General Motors cars.

Opinion at Detroit is divided about free wheeling. Most engineers, however, think that simplified gear shifting in some form is a permanent addition to the American car.

Over 220,000 Bbls. Daily Lopped Off in New Curtailment

CLEVELAND, Jan. 5

THE pinching back of crude production in the flush fields of the southwest and also of runs of crude to refining stills in many sections—to offset the seasonal slackening demand for motor fuel—is gaining momentum, telegraphic dispatches to NATIONAL PETROLEUM NEWS over the week end indicate.

The pinching back process causes sacrifices among individuals and companies and necessitates readjustments in company operating programs. By and large, however, the industry is accepting it as a necessary course of treatment if the present crude market is to be maintained.

The goal in the crude curtailment is 200,000 barrels off the country's output of 2,430,000 barrels daily average output for the week ended Dec. 19. Executives of principal oil companies, meeting in St. Louis Dec. 18 and 19 at the call of President Amos L. Beaty, of the American Petroleum Institute, set this amount as the extent by which crude output would exceed demand for the winter months. Present indications are that the winter slackening in demand may be greater this year than was anticipated when the curtailment figure of 200,000 barrels was set. Pipeline runs from wells in East Texas and Oklahoma City, which represent current demand, have dropped off at a greater rate than production.

The extent of the crude curtailment to date is reflected in the report of the institute on daily average production by fields for the week ended Jan. 2. This included the second Sunday of the Sunday shut-down of producing properties in Texas inaugurated by the Humble Oil & Refining Co. at the time of the St. Louis meeting.

All Texas output for the week ended Jan. 2 was 805,600 barrels daily average, the institute reports. Of this East Texas contributed 290,900 barrels. For the week ended Dec. 19, just before the new curtailment effort was started, Texas output was 954,350 barrels daily average of which East Texas furnished 387,050 barrels.

Oklahoma production for the week ended Jan. 2 was 493,300 barrels daily average, with the Oklahoma City pool supplying 137,150 barrels of this amount. The week ended Dec. 19 Oklahoma daily average was 545,350 barrels, with Oklahoma City making 186,600 barrels.

California has accomplished less in whittling down its crude output, many operators there balking at the revised schedule of the general operators' committee which set 456,700 barrels as total daily allowable output. The week ended Jan. 2 this district produced 499,700 barrels daily average, and the week ended Dec. 19, 509,200 barrels.

Total crude output for the country the current week was 2,209,100 barrels daily average, as compared with 2,430,300 barrels the week under comparison.

Something of the slack that has been taken up to date by the efforts of operators in this country has been lost through increased imports of crude by the few large companies bringing crude into this country, principally from Venezuela. The institute's report the week ended Dec. 19 show crude imports averaged 90,000 barrels a day. The week following they were at the rate of 115,000 barrels a day. Last week they were at the rate of nearly 130,000 barrels a day.

Reports from Texas indicate that the Sunday shut-down or its equivalent of a curtailment of production over the week by one seventh gained still more adherents Jan. 3, in East Texas while other producing sections of the state held to about their output of the week previous. Out of 3685 producers in East Texas, only 914 operated Jan. 3, while 947 were active the preceding Sunday. Production dropped to 89,841 barrels Jan. 3, about 5000 barrels less than the Sunday before.

Two more principal purchasing companies, The Texas Co. and Humble Oil & Refining Co. joined those who have announced they would purchase only six-sevenths of the amount of crude bought previous to this last curtailment effort. The Texas Co. made their order effective Jan. 1, the Humble Jan. 3. This action of the pipeline purchasers aids the curtailment program, leaving it optional to the producer whether he will shut down his properties entirely on Sunday, or produce at the rate of six-sevenths over the week. The effect on the amount of oil taken from the ground is the same.

In West Texas production Jan. 3 dropped to 41,817 barrels from an area normally producing about 214,000 barrels. Including New Mexico the reduction amounted to 188,254 barrels for the day. This is about the amount of the curtailment for the Sunday previous.

Progress in Curtailment Program

	Crude Supply (barrels)		
	Da. Av. Dec. 19	Week Ended Jan. 2	Da. Av. Cut
Oklahoma City	186,600	137,150	49,450
Total Okla.	545,350	493,300	52,050
East Texas	387,050	290,900	96,150
Total Texas	954,350	805,600	148,750
California	509,200	499,700	9,500
All others	421,400	410,500	10,900
Total U. S.	2,430,300	2,209,100	221,200
Crude Imports	89,714	127,714	+38,000
Total New Supply	2,520,014	2,336,814	183,200

About 90 per cent of the wells in the Panhandle were reported down for the day and about 80 per cent of the wells in North Texas, Southwest Texas and Gulf Coast.

Oklahoma production, where the new curtailment effort is spread over the week rather than in a Sunday shutdown, dropped below 500,000 barrels daily average for the week ending Jan. 2. The new order of the state corporation commission, fixing allowable output at 475,000 barrels daily average, became effective Jan. 1 and will show up on the figures for the state for next week.

Present indications are that this figure is too high for January, at least. While the commission found that the Oklahoma City pool had outlet, based on demand, for 160,000 barrels daily, trunk pipelines which move oil from the field have made their allocations on a basis of only 146,000 barrels. Tank car movement of oil from the field since East Texas became important have been small.

The tendency of refiners to reduce runs is throwing back considerable oil and it would not be surprising if the actual demand for Oklahoma crude over January turned out to be 450,000 barrels daily or less.

Wilbur Demands Unit Plan On Middle Dome

WASHINGTON, Jan. 4.—Secretary Wilbur has instructed the oil and gas supervisor in charge of Kettleman Hills middle dome to issue neither drilling nor production permits in that now proved territory until a unit plan of development can be worked out. The order was precipitated by the discovery well of the Petroleum Securities Co. which made a discovery below 9000 feet, the deepest producing well, Secretary Wilbur believes, in the world.

The discovery well was drilled on a contingent permit the condition being that there should be an agreement providing for unit development before production was allowed. Negotiations have not yet resulted in such an agreement. Half the middle dome is owned by the government.

Refiners Reduce Crude Runs 110,000 Bbls.

CLEVELAND, Jan. 5.—Substantial progress in reducing crude runs to stills has been made by refiners since Dec. 19 but as the year ended runs were still considerably above the level recommended last November at the meeting of the American Petroleum Institute.

In the week ended Jan. 2 crude runs to stills of plants reporting to the institute were 110,000 barrels daily below runs the week ended Dec. 19.

Changes in runs by districts from the week ended Dec. 19 to the week ended Jan. 2 were as follows:

	Bbls. per day change
East Coast	+ 9,300
Appalachian	—22,500
Ind.-Ill.	—12,600
Okla.-Kan.	—27,300
Texas	—44,000
La.-Ark.	— 5,200
Rocky Mts.	— 8,600
California	+ 1,300

Refiners reporting to the institute were running at 63.2 per cent of capacity in the week ended Dec. 19 and had dropped to 60.2 per cent of capacity in the week ended Jan. 2. The institute's statistical committee had recommended to refiners that crude runs be held to 54.9 per cent of capacity during the present period.

The extent of the excess in crude runs is emphasized by the fact that gasoline stocks at refineries reporting to the institute increased 2,053,000 barrels from Dec. 19 to Jan. 2. In the four-week period from Dec. 5 to Jan. 2 gasoline stocks rose 3,733,000 barrels.

East Texas Storage

FORT WORTH, Jan. 2.—Production above daily requirements of purchasers in East Texas immediately preceding Governor Sterling's latest order resulted in addition of more than a quarter million barrels of oil to storage.

Capacity of steel storage in East Texas when 1931 closed was 9,773,000 barrels, 252,500 barrels having been added during December.

Stock Dec. 31 was 2,914,205 barrels, an increase of 236,251 barrels, from Nov. 31. Available space is 6,858,795 barrels.

To Appeal Proration Decision

AUSTIN, Jan. 2.—The attorney general of Texas will appeal from the decision of a federal court last summer in the McMillan Petroleum Co. suit, decided in favor of the oil company and against the Railroad Commission of Texas.

The suit resulted in an injunction against the commission in its attempt to prorate production in East Texas. While the law under which the order attacked has been superseded by another, the appeal is being taken because of the element of damages in the case.

Pipeline Runs Pa. Crude Cut For January

PITTSBURGH, Jan. 4. — South Penn Oil Co. has notified producers of Pennsylvania grade crude that smaller runs will be taken in January, amounting to about a 30 per cent reduction in the Bradford field, and 10 per cent in the remainder of the territory.

Bradford runs will be 95 per cent of contract. These contracts with producers specify that the company may elect to take from 75 to 125 per cent of the amount stated, and the company estimates that full amounts taken under the contract would be 125 per cent.

In the remainder of Pennsylvania, and in West Virginia and southeastern Ohio 90 per cent of the November production will be accepted in January, and possibly in February.

Production in November was about 63,000 barrels daily average. The goal sought for Pennsylvania grade crude production is between 55,000 and 56,000 barrels daily average. An estimate of production in early December was mid-way between that for November and the goal.

More refineries running Pennsylvania grade crude have curtailed at least 10 per cent, and some as high as 33 per cent.

Merger of Sinclair with Prairie Believed Imminent

CLEVELAND, Jan. 5

ACTION on the proposed merger of the Sinclair Consolidated Oil Corp., Prairie Oil & Gas Co., and Prairie Pipe Line Co. may be taken at a called meeting of the Sinclair board of directors in New York Jan. 6. Action was not assured, however, a high official of the Sinclair organization said, and the meeting may be adjourned.

Present in New York were officers of the Prairie companies but there was not to be a joint meeting of the Sinclair and two Prairie boards, Sinclair officials said. Press reports, originating in Tulsa, had it a joint meeting was to be held in New York at which action would be taken on the proposed merger.

The situation today, this official said, was the same as a month ago. He said there had been no change over night or since the following statement had been issued by H. F. Sinclair, chairman of the Sinclair Consolidated; W. S. Fitzpatrick, president of Prairie Oil, and Clark Kountz, president of Prairie Pipe:

"No statement respecting the consolidation of our companies is authorized. Such an announcement, to have any authority, must follow meetings of our boards, which meetings have not been held. . . ."

The report that final agreement on the Sinclair-Prairie merger was due Jan. 6 came simultaneously with the resignation of Harry H. Rogers as president and acting chairman of the Exchange banks of Tulsa, and a report in New York that Sinclair and Rockefeller interests had reached an agreement about merger terms and personnel of the consolidated company.

Although Mr. Rogers made no statement in Tulsa concerning his plans other than that he was going to New York, it was conjectured he would be a director and member of the finance committee of the merger which would be styled the Consolidated Oil Corp. This was pure conjecture, the Sinclair official stated today.

The press reports placed H. F. Sinclair in the new organization as chairman of the board of directors; H. R. Gallagher, vice-president of Shell Oil Co. of California and vice-president of the American Petroleum Institute, as president; E. W. Sinclair as chairman of the finance committee, and Mr. Fitzpatrick as chairman of the executive committee.

Talk of a merger of these three companies has been going on more than two years. At one time negotiations were carried on with the Tide Water Associated Oil Co., but these were definitely dropped last October. Rio Grande Oil Co. was another company that was to go into the formation of a new billion dollar petroleum corporation. It was announced last April that H. F. Sinclair had been elected chairman of the Rio Grande board. A few weeks ago he denied he was chairman, saying he had never accepted the post. The denial apparently eliminated Rio Grande.

A NEW York financial paper last week carried an interview with Mr. Fitzpatrick in St. Louis. He was quoted as saying a new corporation would be formed and its stock would be traded share for share for Sinclair common and Prairie Oil stock. Prairie Pipe stock was to be traded for the new company's stock on a basis of 10 shares of Prairie for 14 of the new company. No mention was made of the Sinclair preferred.

At the end of 1930 Sinclair Consolidated had outstanding $14,129,400 of $100 par 8 per cent preferred stock and 6,152,404 shares of no par common. It had authorized, but unissued, 5,000,000 shares of no par preferred shares. No more 8 per cent preferred of the old issue was to be issued. Its authorized common stock totaled 20,000,000 no par shares.

Prairie Oil had outstanding $61,035,000 of $25 par stock out of $70,000,000 authorized. Prairie Pipe had outstanding all its authorized capital stock, $101,250,000. Shares are $25 par value each.

Sinclair has nine refineries in the United States of which eight were active late in 1931. It has extensive crude oil production, and some pipelines in the Mid-Continent. It sold its interest in the Sinclair Pipe Line Co. to Standard Oil Co. of Indiana in September, 1930.

Prairie Oil & Gas Co. through the 71 per cent controlled Producers & Refiners Corp., has three refineries with daily capacity of 17,000 barrels. Its cracking capacity is 6300 barrels of cracking stock daily. With Sinclair's crude capacity of 137,500 barrels daily and cracking capacity of more than 150,000 barrels daily, the new company, if the merger goes through, will be one of the larger refining organizations in the country.

SINCLAIR, following acquisition of the Pierce Petroleum Corp. properties in the spring of 1930, has distribution for its products in 44 states, lacking representation in only four western mountain states. The major part of its distribution, however, was concentrated in the states that touch the Atlantic and Gulf coasts and in the central west.

Sinclair also has considerable foreign distribution which it supplies with its own tanker fleet.

Mr. Rogers was succeeded as president of the Exchange banks of Tulsa by Elmore F. Higgins of New York. He was elected chairman of the banks' boards at directors' meetings in Tulsa Jan. 4. This arrangement will enable him to continue active in connection with the banks' extensive oil affairs.

Mr. Rogers formerly was with the McMan Oil Co. He engaged in banking in San Antonio and returned to Tulsa in 1928 to fill the vacancy in the Exchange presidency caused by the death of James J. McGraw.

Trade Leaders Threaten Market Stability

CHICAGO, Dec. 31.—Less annoying to the oil companies than the free premiums uncontrolled dealers are giving away but which has possibilities to continue market disturbance, is the practice of retailing at service stations some article at or near its wholesale price, the sale being contingent upon the purchase of gasoline.

A few days ago there appeared in Chicago newspapers an advertisement of Trackside Oil & Gas, Inc., which offered electric clocks at $1.19 to $2.49 with the purchase of seven gallons of gasoline at 2 cents less than the posted price of standard brand gasoline.

These clocks were being offered at the 15 trackage stations of Bulk Service Stations, Inc., Wholesale Oil Stores, Lloyds Direct Service Stations, Inc., Martini Oil Co., and Blue Rose Oil Co., all affiliated with Trackside Oil & Gas, Inc.

It was claimed the stations had saved Chicago motorists $100,000 in 182 days to the time the advertisement was published.

Observers of the trend in marketing tactics of Chicago's uncontrolled dealers, predict that these dealers eventually will alienate much of their neighborhood commercial trade. The dealers' stations usually retail at the wholesale price some article which may be an important article in the merchandise line of a neighborhood store The dealers are losing many friends among their neighboring merchants with the use of these leaders.

Outlook for '32 Business as Editors View It

NEW YORK, Jan. 2.—Many industries, in 1932, will make at least a good start on the road back to prosperity by getting away from the ruthless price cutting that characterized 1931.

This is the gist of opinion from editors of 135 business papers, in their ninth semi-annual survey of the business outlook made under the auspices of the National Conference of Business Paper Editors and the Associated Business Papers. Warren C. Platt, publisher of NATIONAL PETROLEUM NEWS, is president of the latter. Its membership includes leading technical, trade, service and professional papers in this country and Canada.

Many business men in many lines, report the editors, realize they went too far this past year in attempting to stimulate trade by reducing their prices, in some cases debasing the quality of their product, that they must get back to a basis where a fair price can be secured for a fair product or service, if prosperity is to be returned to capital and labor.

In some fields it is reported the depreciation of raw materials and finished products is ended. A swing away from sub-standard goods made to sell at low prices, regardless of quality of materials used, is noted in the merchandising fields, particularly with department stores.

A greater tendency towards definite future planning, both by individual companies and industries as a whole, has laid a good foundation for the coming year.

"In the stony soil of American business in 1931 were planted seeds of certain hardy trends which should sprout in 1932," hopefully sums up the editor's survey of the business outlook.

Nebraska Bans Colored Gas, Except Ethyl

(By Telegraph)

LINCOLN, Neb., Jan. 4.—Governor Bryan, Nebraska, has taken the war path again against the oil industry with a proclamation through the state bureau of food, drugs, and oil that after Feb. 15 the sale of all colored gasoline must stop, excepting that containing Ethyl fluid.

Independent refiners marketing a colored, anti-knock gasoline in Nebraska will seek an injunction to prevent interference with the sale of their product. The recent Colorado decision (NATIONAL PETROLEUM NEWS Dec. 9) won by Derby Oil Co., Wichita, Kansas, is believed to be an aid to refiners in fighting the Nebraska proclamation.

The banning of colored gasoline, excepting Ethyl, is a result of complaints to the governor that there is no difference in second and third grade gasolines. Marketers were pictured as coloring third grade to deceive the public and to establish price discrimination in the state.

Nebraska laws provide that all gasoline shall be water white, free from all impurities, and limited to an initial boiling point of not more than 134 degrees, and an end point of 437 degrees. Also, the governor was granted authority to change these specifications to conform to changes in the federal specifications.

This legislative authority of the governor was declared unconstitutional in Douglas county (Omaha) and no appeal taken. When the federal specifications deleted water white requirements in 1926, Governor McMullen in 1927 issued an order permitting the sale of colored gasoline. The coloring of Ethyl gasoline is not a requirement of federal specifications.

The Colorado law made the state oil inspector the judge and did not allow the sale of colored gasoline unless it contained special anti-knock qualities. The inspector refused to license any colored gasoline excepting Ethyl grades, and Derby Oil Co. went to court for its anti-knock "Flexgas." The law was declared unconstitutional Dec. 3 in the Denver District court.

Plan Ladies' Night

TULSA, Dec. 31.—The Petroleum Motor Transport Association will hold its annual Ladies' Night party the evening of January 15, with Glen Dial of Glen Dial, Inc., as host. Each member of the association will have the privilege of inviting a tradesman and his wife.

Crude Stocks Up In November

NEW YORK, Jan. 4.—The first increase of 1931 in gross domestic crude stocks in pipelines and at tank farms came in November when stocks rose 2,008,000 barrels, according to the American Petroleum Institute. Decreases totaling 26,447,500 barrels occurred up to November.

Indianapolis Jobber Brings Suit Against Chain Store Tax

INDIANAPOLIS, Jan. 4

OUR industry has started legal action against the Indiana chain store tax with the filing of a complaint in the Marion county (Indianapolis) circuit court by the Midwestern Petroleum Corp.

The petition seeks a permanent injunction, asserting that the chain store tax is not applicable to Midwestern Petroleum's business, as bulk plants and service stations are not stores in the meaning of the act and in the common usage of the term store; and that the act imposes multiple taxation.

If the act is held to apply to service stations and bulk plants as stores the petition asserts further that the law is unconstitutional under the Indiana and the United States constitutions.

This action is one of the four proposed by Indiana marketers, attacking the chain store tax for the four types of distribution (N.P.N. Dec. 9). Midwestern Petroleum Corp., Indianapolis, is a jobber-marketer company. It has ten service stations in Indianapolis and six bulk plants in central Indiana.

The petition compares chain store operations in petroleum and in other businesses, and lists the present special taxes and licenses imposed on oil companies in the state.

As the tank car is the unit of wholesale oil purchasing, the large company has no advantage over the small company, and the advantage of big scale buying claimed for chain store operations does not hold for oils, the petition states. Cash purchasing, national advertising, and quality of products are not peculiar to any type marketing organization in oils.

Numerous outlets have been established by oil companies to meet demands of the customer, the petition continues. Gasoline and oil are not stored, but purchased as needed, and the sale involves the servicing of the customer's auto as well as the mechanical handling on the part of the sales person.

The petition then goes on to show that the service station is not a store in the commonly accepted sense of the word, and that this difference was intended in the writing of the act so that service stations would not be included in taxing.

Instead of sales being made in a store building, gasoline and oil are sold out in the open. The station building is only an office for the sales force.

Through this difference in physical makeup of the building, and in the lack of advantages generally claimed for large scale operations, the petition asserts there is a material difference between chains in petroleum and in other lines of business.

Service stations and bulk plants are already subject to taxes and licenses not levied on other businesses, and the chain store tax would add another burden to oil marketers, the petition claims.

These taxes and licenses are:

Act of the general assembly requiring a dealer in gasoline to obtain a license. The plaintiff has paid the $1 license and posted a $10,000 bond, and 80 per cent of the plaintiff's business is in gasoline. This act was adopted prior to the chain store tax.

Then there is the state inspection fee, greatly in excess of the cost of inspection, so that two-thirds of the fees paid in Indiana are revenue to the state.

Another tax is that of special licenses for cities and towns; amounting to $1 a year in Indianapolis to conduct business and further the $15 fee for each gasoline pump. These taxes are in addition to the usual personal property and real estate taxes.

On top of these special taxes the oil industry is charged with the collection of the state 4 cent gasoline tax.

The tax also is attacked on the ground it is unconstitutional as it does not grant the same terms to various sizes of businesses, as there is no basis for the classification.

Indiana's chain store tax was adopted in 1929, and payments are retroactive. Lower courts held against the measure but it won in the United States Supreme court.

The state set up machinery to collect the tax beginning with Jan. 1, 1932, and the back taxes also. There is a fee of 50 cents for each application.

As the ultimate owner of the business pays the tax, lease and agency outlets are included as company stations as far as collection of the tax is concerned. It is possible also to tax a place of business several times; the oil company paying the tax on the petroleum end of a lease and agency station while the operator would be held for a tax on the other merchandise sold.

The annual chain store tax in Indiana is $3 for a single store; two to five stores $10 each additional; five to ten stores $15 each additional; ten to twenty stores, $20 each additional; above 20 stores $25 each additional.

Wisconsin Dixie Group Elects Directors

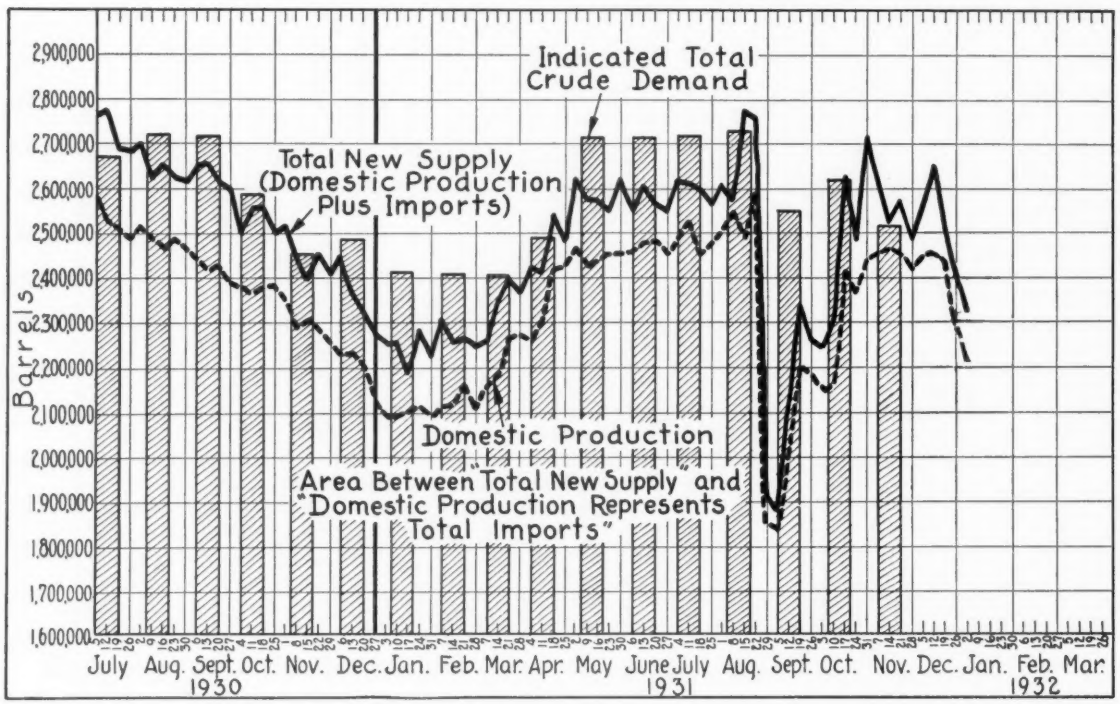
OSHKOSH, Wis.—Dixie directors and licensees in Wisconsin added two more members to the board and adopted a new set of by-laws at a meeting in Oshkosh Dec. 28.

The board now consists of seven members, elected for three years, excepting the incoming board which has staggered terms so that all officials will not retire at the same time.

The directors are: J. G. Stilwell, Triangle Oil Co., Iron Mountain, Mich.; E. H. Riggs, Whiting-Riggs Oil Co., Ripon; H. G. Cross, Waupun Oil Co., Waupun; R. C. Streich, Streich Oil Co., Manitowoc; J. F. Hanson, Hanson Oil Co., Burlington; J. H. Spengler, Spengler Oil Co., Clintonville; and R. H. Downes, Cook & Brown, Oshkosh.

Officers for this year are E. H. Riggs, president; H. G. Cross, vice-president; and R. H. Downes, secretary-treasurer. Officers are elected by the directors.

Review of Late Production News



This chart shows crude oil supply according to the American Petroleum Institute reports (solid line) in relation to indicated crude oil demand as taken from the Bureau of Mines monthly reports (shaded columns).

THE Sunday shut-down and other curtailment measures caused a further drop of 83,800 barrels in daily average domestic crude production in the week ended Jan. 2 the American Petroleum Institute estimates. Crude imports continued to gain, however, rising 12,714 barrels daily average to 127,714 barrels per day.

Oklahoma City field output dropped 33,900 barrels daily average and East Texas 25,100 barrels daily average.

Average new crude supply for the week was 2,336,814 barrels per day.

California

WHILE inclement weather delayed year-end operations on Petroleum Securities Co.'s Burbank No. 1 discovery well of the middle dome, Kettleman Hills, plans were perfected for locating the source of a flow of water that interfered in a recent production test.

Superior Oil Co., working through an agreement with the Bolsa Chica Oil Co., may start operations on an offset to the Burbank—Downing No. 1—although strenuous efforts are being made to delay development of the middle dome.

Whether or not the area will be developed on a plan patterned after the North Dome Association has not been decided, but it is fully expected that some regulated drilling program will be suggested and adopted by the interested operators. Geologists now place the probable size of the field at between 2200 and 2500 acres.

Oil field operations in the state during 1931, as reported to supervisor of oil and gas, indicated only 353 had been started as compared with a total of 924 a year ago. Deepening and redrilling jobs showed a higher ratio with 501 for the past year as against 670 for 1930.

Daily Average Production Important Districts, American Petroleum Institute Figures

(By Telegraph)

	Week Ended Jan. 2 Barrels	Dec. 26 Barrels
Okla. City	137,150	171,050
Oklahoma	493,300	534,950
East Texas	290,900	316,000
Total Texas	805,600	845,150
California	499,700	499,600
East of Rockies	1,709,400	1,793,300
Total U. S.	2,209,100	2,292,900

East Texas

COASTAL Drilling Co. (Pipes & Mack) No. 1 Alexander, which flowed at the initial rate of 43 barrels in 20 minutes from sand at 3574 to 3604 feet extended the Gladewater-Longview district a quarter of a mile southeast. The well is in the Delores Sanchez survey, about 2500 feet east of Arkansas Fuel Oil Co. No. 2 Castleberry, which showed only 500 feet of oil when opened and would not flow when swabbed.

Cranfill & Reynolds et al No. 1 Rash estate, in the E. N. Eubanks survey, southwest of Jamestown and about three miles north of the nearest production in southern Upshur county, was scheduled to drill plugs and test early this month. Sand was logged in the outpost from 3708-29 feet and on a drill stem test made Nov. 15, the well showed 27 fourbles of 34 gravity oil in 11 minutes with the tester only partially opened.

Two Upshur county wildcat locations were announced last week. One is about three miles northwest of Cranfill & Reynolds et al No. 1 Rash estate.

The other Upshur wildcat location was Tarr, Gillette and Potter No. 1 D. A. Irions, in the D. B. Lucas survey and approxi-

mately a mile north of Amerada Petroleum Corp. No. 1 Wade (Kelsey), a failure drilled prior to discovery of the East Texas field.

Some quarters reported that up to 10,000 barrels of daily allowable production in East Texas was at present without an outlet, but this was thought to be largely in the hands of one concern, whose bulk terminal on the Gulf Coast was nearly filled necessitating shutting in of at least part of the company's 80-odd wells in the field.

Attention in West Texas was still focused on Ector county, but resumption of drilling in a deep test in extreme southeastern Irion county, which is attempting to uncover the Ordivician horizon producing in Reagan county 50 miles west was due to receive some of the interest in the future.

Stanolind Oil & Gas Co. No. 1 Williams, Irion county wildcat test, resumed drilling at 6,795 feet after changing from cable to rotary tools. The test is approximately 50 miles east of Big Lake Oil Co. and Texon Oil & Land Co. (Continental) deep Ordivician producers in Reagan county. It is scheduled to test the deep Reagan horizon. The test is 1320 feet from south and east lines of Sec. 1196, T. T. Ry., survey.

Kansas

FAILURE of an important test in the Rice-Ellsworth county area of Kansas serves to emphasize the probability that this general region will contain many disappointments. The test is that of Barnsdall Oil Co. and Tatlock, SE NW SW of 25-16S-10W, Ellsworth county. It had the Siliceous lime, in which zone the pay is found in this territory, at 3363 feet with a showing of oil. It developed a hole full of water at 3375-82 feet.

A mile north and two miles west of the Barnsdall well is the producer of Gypsy Oil Co. and Palmer, drilled in months ago and shut in. It is good for 1500 barrels or more. Three-eighths of a mile north of the Gypsy well, Derby Oil Corp. tested its recently completed producer the past week. On six hour pumping it averaged a little more than 40 barrels per hour. It is in the SE SW NW of 22-16S-10W.

Oklahoma

FAILURE of a much-watched test in the southwest part of the general Seminole district was recorded at the end of the week. Mid-Continent Petroleum Corp. and others' wildcat in the SE SW NW of 2-6-4E, Pottawatomie county, drilled Simpson dolomite from 4265-71 feet and after getting a showing of oil began filling with water.

The test had been closely observed since it started drilling, as it was on a geophysical "high" and represented one of the infrequent cases in the Mid-Continent of wildcatting on the basis of geophysical mapping. It is about a mile and a half from production in the St. Louis pool.

The fact that a showing of oil was had is encouraging to another test in the same "play." This is the Carter Oil Co.'s in the SW corner of 35-7-4, the section immediately north of the Mid-Continent failure. The Carter well was bottomed at 4155 feet as the week closed and was ready to drill plugs and go into the Simpson formation, of which the Wilcox sand is a member. The Carter well thus far appears higher on structure than was the failure.

Of some significance was the appearance of water in a well at the northwest edge of the Oklahoma City pool. It is the second well producing from the Wilcox sand to show water. It is the Wilcox Oil & Gas Co.'s in the NW NE NW NW of 10-11-3W. Opened Dec. 27 for test of its productive capacity, it flowed 4552 barrels in four hours and several tests indicated that it was making about two per cent water.

Mississippi

GULF Production Co.'s wildcat in Clarke county, Miss., has recovered lost tools and is to resume drilling from total depth of 4653 feet. This test attracted much attention two months ago when it tested a showing of oil found in what corresponds to the Blossom sand of north Louisiana. Its objective now is the Tuscaloosa formation, or the practical equivalent of the Woodbine of East Texas and other prolific fields. The test is in the center SW SW of 10-2N-16E.

Louisiana

Two miles south of the Zwolle pool, E. F. Neely has completed No. 1 Clanan, 14-7-12, Sabine parish, at 2539 feet. It started flowing by heads and was estimated as good for at least 1000 barrels daily. It represents an extension of the producing territory, which, however, has been quite "spotted" throughout the Zwolle pool development.

Kansas Producers to Meet Jan. 14

TULSA, Jan. 2.—Meeting of Kansas oil producers in Wichita, Jan. 14, has been called by Thurman Hill, member of the Public Service Commission of the state. Its purpose will be to formulate a new state proration order. The call followed the issuance of new orders reducing production in two flush areas.

The Ritz-Canton pool, McPherson county, is now restricted to 10½ per cent of its potential and the Raymond pool, Rice county, to 15 per cent. Previously, the Ritz-Canton had been allowed approximately 19 per cent and the Raymond 20 per cent.

In the forthcoming meeting the question of restricting the Voshell and Eastborough pools will be raised. The Voshell pool has not been prorated since early in 1931. In the Eastborough pool, which is just east of Wichita, the Derby Oil Corp. and the White Eagle Oil Corp. last week cut their takings 40 per cent.

The Kansas commission is requiring potential tests of six scattered wildcat producers in Rice, Ellsworth and Barton counties, heretofore not tested since completion, and ordering their owners to refrain from producing them until after the Jan. 14 meeting.

Petroleum Exposition Postponed

TULSA, Jan. 2.—The board of directors of the International Petroleum Exposition have postponed the Eighth Exposition, originally planned for May, to the fall of 1932. Directors believe from all present indications the exposition in the fall will be an entire success.

200,000,000 Barrels of Oil Yet to Come From Oklahoma City Pool

By W. F. Lowe

N. P. N. STAFF WRITER

TULSA, Jan. 2

THIS second of a series of articles prepared to evaluate, briefly, the present status of the flush oil pools of the country brings up to date the Oklahoma City pool.

More than 200 million barrels of oil are yet to come from this prolific area.

It is to be a flush pool for many months. It will, necessarily, be produced under conditions of strict control. This is because of the limitation in demand, as compared to its potentialities, and because of the realization that final recovery will be much greater than under control.

The field was discovered in December, 1928. Except for a few months in its early life, control in production has been necessary throughout. At present its allowable production is fixed by the state Corporation Commission at 160,000 barrels daily.

The field may be said to be thoroughly defined, except for a belt of Wilcox sand which lies along the west flank. How extensive this will be is unknown but probably will not be more than four locations wide. The field could be extended to the northwest by considerable distance, it is thought, but there it runs into city property and the government of Oklahoma City has refused to open more city lots to drilling. That constitutes a limitation in that direction.

In estimating the future recovery of the Oklahoma City pool some months ago (N. P. N., March 18, 1931) it was said the lime zone was nearly depleted and that it would doubtless be completely finished by the end of the year. The figure given at that time as the ultimate recoverable oil from that zone was 20,800,000 barrels. On that date it had produced approximately 19,000,000 barrels and its total yield to Dec. 1, was 20,155,000 barrels. Estimates now are that the 35 remaining commercial producers in the zone are not likely to boost the total much more than 500,000 barrels. In other words, the lime zone may be left out of calculations on the future recovery of the field.

The intermediate zone, see accompanying map, has not improved with age and water advances are tending to reduce the possibilities in a number of places. Since the original estimate of 22,500 barrels per acre was made last spring there has been no reason to change the figure, except possibly to revise it downward. The spread of water is largely responsible for the change and plugging efforts on the part of operators have proven more or less futile. One company tried to plug over 50 wells in this area and had only about a dozen successful results.

THE reason for the failures is thought to be the unconsolidated nature of the sand itself. Most of the wells now making water were drilled through several of the distinct strata which make up this zone. Chief among these horizons are the Stamper lime, immediately above the Arbuckle lime, the Johnson sand and the School Land sand. Between the last two is a mixed zone, and the School Land sand is separated from the Wilcox above it by an upper mixed zone and the Tyner series, or green shale zone.

The early casing programs of the field included efforts to take in as many of these horizons as possible, the result proving rather disastrous. Finding that some of the pays contained large volumes of gas, operators sought to utilize its pressure in the raising of oil from other sands. Though this procedure resulted in larger initials it is also thought to have brought water in sooner. The spread of this water early in the year was so rapid that corrective measures were taken to check it but in only a few places were the plugging efforts successful. A shut-off was not obtained in most of the wells, and some really fine producers were almost entirely lost in the process. Wells making 6000 barrels per day failed to come back after plugging attempts, some going dead completely.

THOUGH there are still many undrilled locations in the intermediate zone, it is not likely that many will be drilled and, with water encroachment but slightly checked, there is reason to believe the ultimate recovery per acre will not greatly exceed 20,000 barrels. The recent survey of the area made during the taking of potentials gives further evidence that such a conclusion may be correct when the figures are compared with those of last April. During that period several new wells were drilled but the potential showed an 11 per cent decrease. Of the 419 oil wells, 83 were making water in amounts varying from a trace of 61 per cent and 27 of the 34 which have ceased to flow have been put on artificial lift. The total daily potential of the zone, with 39 wells not reporting, was 1,872,000 barrels. This figure is based on four-hour gauges only.

Returning again to estimates and assuming approximately 4000 proven acres for the in-

termediate zone, with few if any additional wells to be drilled, the total recovery for that area can be placed in the neighborhood of 80,000,000 barrels. It has produced to date slightly less than half this amount.

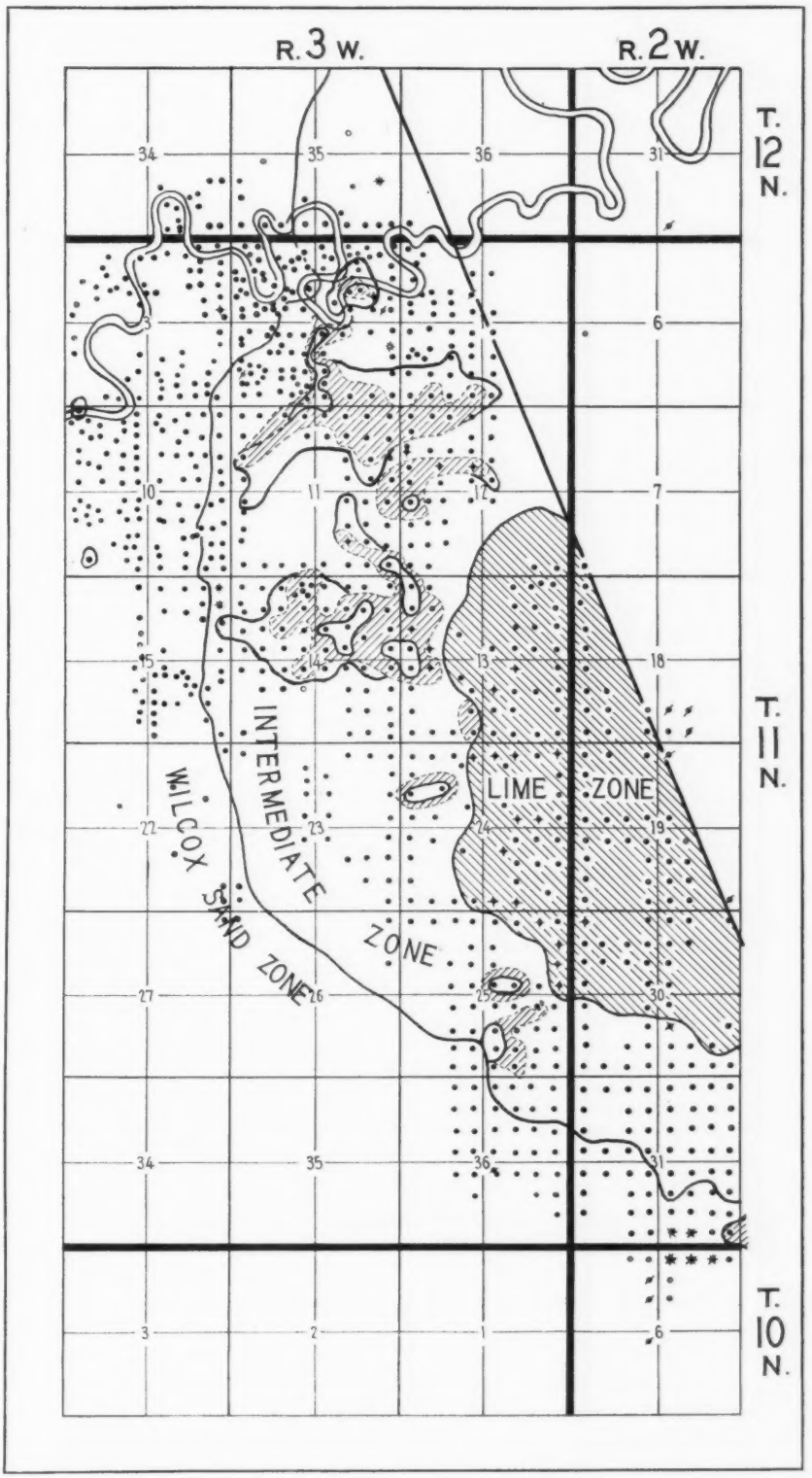
It is in the Wilcox sand production that early estimates failed to present a true picture of the future output. An ultimate recovery of 60,000 barrels to the acre does not now seem high enough and many engineers have boosted their figures up to 100,000 barrels. However, developments of the past few weeks may cause more conservative estimates to be made in the near future.

As shown on the accompanying map, the Wilcox zone fringes the western side of the pool. Narrow and dipping steeply on the south end, it widens and flattens out on the north and is thought to extend well up into the business district of Oklahoma City. The average initial of the wells in this horizon has been around 25,000 barrels and many have been estimated as being over four times that size. On the south end the well locations have been regularly spaced with the usual 660-foot intervals, but on the north, where the properties were divided into small city lots, they have been crowded as close as 50 feet apart. This crowding and the consistency of the pay horizon will hold down the recovery per well but will greatly increase the yield per acre.

Estimates on the number of producing acres in the Wilcox area have also been revised upward, due to completions along the west edge and on the north west. The Phillips Petroleum Co. well, SW SW SW 23-11-3, came in as a huge producer in wildcat territory and proved the contention of its geological department that there was a fringe of Wilcox production down the west side of the Structure. There have since been several wells of like proportions offsetting this discovery, though the recently completed north offset flowed but 560 barrels in three hours, thus indicating the sand is not to be consistent in this area.

A little over two miles northwest of this group, in the SW of 10-11-3, the same company has water showing in a Wilcox well

Water Spread Map of Oklahoma City Pool



Showing the spread of water in the various producing zones of the Oklahoma City pool the past year. All wells in the Arbuckle lime zone on top of the structure are making water and there are but 36 commercial producers left in the area. In the intermediate zone, where the wells are bottomed in the lower Simpson formation, 104 wells have shown water, though some have been successfully plugged back giving temporary shutoff. Those wells within the inside solid lines were making water last January. The hatched areas outside these lines show the spread up to May 12, while the outside solid line shows the position of the water front at the close of 1931. Note the two wells on the west side of Sec. 10, both in the Wilcox sand and comparatively recent completions which are reported to be cutting

in an area where it was least expected. A similar report came in this week on a well of the Wilcox Oil & Gas Co., NW NE NW NW of the same section, which flowed on test 4552 barrels in four hours but was cutting two per cent b. s. and water. These wells were not drilled unusually deep so the presence of water early in their productive life indicates edge water is encroaching. Pressure declines and temperature gauges along the west side and particularly in Sect. 10, suggested that edge water might be on its way but it has not shown itself except in these two recent wells.

It seems evident then that the Wilcox production on the west, from the extreme south end of the pool to the southwest corner of Sect. 3, is not likely to average over one-half a mile in width and edge water will be close to that limit. From the latter point, however, it bulges to the north where it may be as much as two miles wide. Restrictions placed on drilling in a good portion of this area, which is mostly within the city limits, are evidently going to stick and much of the definitely proven acreage will never be drilled. This is another factor which should tend to increase the recovery of wells already on production in the north end. If the wells on the south side of the bulge are closely watched so that water cannot reach the wells on the north, edge water should not enter them for a long time and the oil down the structure in the undrilled restricted area could move up to closely spaced town lot wells.

When all the present known factors are considered in calculating total production for the Wilcox zone, and the former estimate of 60,000 barrels per acre is given a generous boost to 80,000 barrels, the ultimate recovery should approach 192,000,000 barrels. According to a recent paper given by Colin C. Rae, petroleum engineer of the Skelly Oil Co., Tulsa, the Wilcox sand is estimated as being about 15 per cent depleted. Applying this figure to the above estimate would leave 163,000,000 barrels yet to come from this horizon.

A glance at the field as a whole then, gives the following possibilities for future production. An additional 500,000 barrels from the lime zone, 40,000,000 from the lower Simpson and 163,000,000 from the Wilcox, makes an eventual total of 203,500,000 barrels. The total production at the end of 1931 was 87,740,000 barrels, so, on a basis of the above figures, the field may be said to be approximately 30 per cent depleted.

Violence Threatened in East Texas Testified in Brock-Lee Suit

(By Telegraph)

HOUSTON, Jan. 5

WITHOUT formally ruling on the question of jurisdiction, a three-judge federal court here decided Monday to hear evidence in the suit of J. D. Wrather and E. Constantin, East Texas operators, against Governor Sterling; Brigadier General Wolters, in charge of state troops in that area; the state railroad commission and the state attorney general.

The plaintiffs ask an injunction against these state officers to prevent interference with production of oil from their properties in East Texas and damages of $100,000.

While the suit also attacks the constitutionality of the state oil and gas conservation law, most of the testimony has been directed against martial law, which was invoked in the field last August.

The plaintiffs, in cross examination of state witnesses, seek to establish that martial law was imposed because the price for crude was too low and not because there were threats of violence in the field, as the governor asserted in his military proclamation.

Two judges have displayed a tendency to doubt that the East Texas situation last August was different from that usually prevailing in boom oil fields where criminally inclined are wont to congregate. One judge asked a witness from Oklahoma whether it was not true that Oklahomans strongly favored executive control of private property.

The suit, filed last October, included also as plaintiff the Brock-Lee Oil Co., which has withdrawn from the case. At that time an injunction was asked against General Wolters and the state railroad commission, whose order, was being enforced in East Texas by the militia after a 30-day complete shut down.

Federal Judge Bryant, sitting in the present court, issued a temporary order permitting Brock-Lee to flow their wells 5000 barrels daily. Thereupon the governor issued the commission's order as an executive order. General Wolters was cited for contempt but pleaded he was following a superior officer's orders and no further action was taken then. The plaintiffs amended their suit and included the governor.

The plaintiffs allege the shut down was done at the behest of the large oil companies and that the governor's assertions as to the necessity for martial law are false.

General Wolters was first witness for the defense. He contended, in a verbal tilt with Judge Hutcheson, that the governor was the sole judge of the necessity for proclaiming martial law. Other witnesses testified danger of fire, dynamiting, and other violence was imminent last August, when landowners, royalty owners and small operators were aroused because of the breakdown of the state railroad commission's attempt to prorate production.

Sergeant Gonzales, of the Texas rangers, on duty in East Texas the past year, said he had found many cases where violence was threatened. The danger is still there, he said, as some landowners have said they will not permit a return to former chaotic conditions in the field but will protect their oil properties just as they would their homes.

Composition of Greases and Methods of Analysis

By F. W. Wenzel, Jr.*

THE complete analysis of any type of lubricating grease is a problem which will arise in almost every commercial testing laboratory for it is often desirable to know what type of grease is best suited for a particular purpose. Besides there are at the present time many different types of greases on the market, and methods of analysis are necessary in order to distinguish between the good and the bad. Methods of testing are also essential to any firm or corporation who are desirous of purchasing greases in large quantities by means of specifications in order to secure uniformity in price and product.

Many tests made on greases cannot be used as an indication of the value of the product as a lubricant. Chemical tests usually give information as to the exact composition of the grease in question, whereas physical tests provide the means of securing a uniformity in the material to be purchased in the future. It is the writer's belief that the best test for a grease is its actual use in the field under working conditions. After having decided from actual experience that a certain grease is giving satisfactory results in service, it is then possible by analytical means to see that a similar grease is purchased in the future.

It is the purpose of this paper to bring together and discuss in brief various chemical and physical tests which might be applied in the analysis of lubricating greases, together with their application to the most common types of automobile lubricants met with on the market at the present time. The complete method of procedure will not always be given but references to original articles are furnished in order that they might be referred to if desired. In view of the fact that all of the following methods are found scattered about in various papers and books on lubrication, as well as in books of general analysis, a summation is both necessary and appropriate.

The following chemical tests might be applied in the analysis of a grease, (1) Complete chemical analysis, (2) per cent Ash, (3) Corrosion, and (4) per cent Water.

The A. S. T. M. Standard Method of Analysis of Grease[1] is a very satisfactory procedure to follow for the determination of the exact chemical composition of all types of greases. This method includes the determination of ash, filler, soap, fat, petroleum oil, asphalt and tar, free alkali or acid, and water.

In the determination of percentage ash, 2 to 5 grams of the grease is ignited in a weighed porcelain crucible until the ash is free from carbonaceous matter, cooled in a desiccator, and weighed. The percentage of non-combustible fillers used in some types of greases may be determined in this manner. Small percentages of ash indicate the presence of soaps,—the type of soap might be determined by applying general qualitative methods of analysis to the ash.

A CORROSION test is used to detect the presence of acid or alkali materials or other corroding substances. General procedure is to submerge a bright strip of copper in a small sample of the grease at room temperature for 24 hours or at 100° C. for 3 hours, and then examine the copper for any discoloration, a comparison being made between the used strip of copper and one of the original brightness. Greases of good quality do not possess corrosive properties.

The amount of water present in a grease may be accurately determined by the A. S. T. M. Standard Method[2], which is often referred to as the Xylol Method. The procedure consists simply of mixing a sample of the grease with xylene and then subjecting it to distillation, the water present being brought over in the first 10-20 cc. of the distillate.

IT IS impossible to determine the percentage of water by heating a sample of the grease at 100-110° C. for several hours and noting the loss of weight due to the fact that many greases contain mineral oils which are volatile at 100°C. In some greases of the mineral oil soap-thickened type small quantities of water are absolutely necessary in order to give the material the proper structure and consistency, but the presence of water in other types is of no value and is, therefore, not necessary.

The above mentioned tests if properly applied should give complete information as to the chemical composition of any grease in question. In dealing with automobile lubrication one usually becomes concerned with two types of greases, namely, pressure greases and gear greases. The pressure greases consist of two types, i. e., cup greases which are used for bearing lubrication, and high pressure greases which are used for chassis lubrication.

The gear greases find use chiefly in the transmission and the differential. The composition, as determined by the above mentioned methods, of 46

*Chemical Laboratory, Virginia State Highway Dept., Richmond, Va.

Table 1

Composition of Pressure Greases

Sample No.	Mineral Oil	Fatty Acids	Asphalt and Tar	Filler	Ash	Color	Type
1	84.8	10.2	None	None	1.3	Light	Cup
2	86.0	7.2	None	None	1.1	Light	Cup
3	86.3	14.1	None	None	2.0	Light	Cup
4	86.0	11.0	None	None	1.5	Light	Cup
5	78.3	14.4	None	None	2.9	Light	Cup
6	83.4	13.2	None	None	2.4	Light	Cup
7	88.7	10.4	None	None	1.1	Light	Cup
8	86.4	8.4	None	None	1.8	Light	Cup
9	78.4	8.4	None	None	1.3	Light	Cup
10	84.4	13.9	None	None	1.2	Light	Cup
11	84.3	13.3	None	None	1.8	Light	Cup
12	86.5	12.2	None	None	1.6	Light	Cup
13	87.6	9.1	0.7	None	1.6	Dark	High Pressure
14	81.6	10.5	Trace	None	1.7	Dark	High Pressure
15	86.7	9.8	1.0	None	1.9	Dark	High Pressure

Note: All determinations in % by weight. Trace denotes less than 0.5%.

greases of various types secured from different sources is given in Table 1 and Table 2. All of these greases were obtainable on the market at the time of this investigation and they include samples of the following well known brands, Alemite, Autoline, Dixoyl, Lubro, Pennolene, Standard, Sunoco, Warren, Whiz, and others.

From Table 1 it is seen that the composition of the 15 pressure greases investigated is of a general nature. This type of grease consists essentially of a mineral or petroleum oil thickened by means of a soap, that is, the metallic salts of some of the higher fatty acids,—chiefly, palmitic, stearic, and oleic. The percentage of fatty acids given in Table 1 is, therefore, a measure of the soap content of the grease in question.

Sometimes these fatty acids are present as free acids but this is not often the case. The percentage of mineral oil present is seen to vary from 78 to 89 per cent, whereas the fatty acids obtained vary from 7 to 15 per cent. The greater the soap content the thicker or heavier the grease. Lockhart[3] states, "Cup greases are nearly always lime-soap greases, from 12 to 23 per cent of lime soaps being present combined with a mineral oil distillate of low or medium viscosity. Water is generally present from traces up to 1 per cent. The small amount of emulsified water, usually less than 0.4 per cent is added to give the proper consistency to the grease and to prevent ultimate separation of the lime soap and the mineral oil."

Small quantities of water were found present in the greases considered in Table 1, the removal of which by heating caused the separation of the soap from the mineral oil. The percentage ash found may also be used as an indication as to the quantity of soap present.

In the greases considered, the percentage ash varied from 1 to 3 per cent. Examination of the various ashes, qualitatively, showed the presence of sodium, calcium, aluminum, and lead soaps; however, the calcium soaps predominated. Fillers and asphaltic and tarry matter are not found in this type of grease; the small amounts reported in samples 13, 14 and 15 arise from the type of mineral oil used.

FROM Table 2 it is seen that from the analysis of 31 gear greases four types, based on composition, are found, i. e., (1) Mineral Oil—soap thickened, Samples 16-32; (2) Mineral oil —thickened with asphaltic and tarry matter, Samples 33-35; (3) Mineral oil—thickened with so called fillers, Samples 36-41; (4) Heavy mineral oil with no thickener, Samples 42-46. In one or two cases there is a bit of overlapping in view of the fact that different types of thickeners might occur in the same grease, for example, sample 34 was thickened by both soap and asphaltic and tarry matter.

Type (1) of the gear greases consist of a heavy dark mineral oil, 85 to 95 per cent, thickened with lime or soda soap, 6 to 10 per cent, which is emulsified by means of a small amount of water as in the case of the cup greases. Such a grease has a smooth, soft consistency and a cellular structure. On heating above 100° C. this type of grease separates into soap and mineral oil due to the removal of the water present, and should, therefore, not be used on gears operating at or above this temperature. The small amounts of asphaltic and tarry matter found present in this type evidently arise from the dark heavy mineral oil which is used. Other types of fillers are found to be absent from these greases, and the percentage of ash is found to vary with the soap content.

Type (2) of the gear greases consist of a heavy dark mineral oil thickened with asphaltic and tarry matter together with small amounts of soap. Such a grease possesses tacky and adhesive properties, is very elastic, and is of a fibrous nature. Such a grease should contain no water and, therefore, does not separate when heated to 200° C. or above.

Type (3) of the gear greases consist of a heavy, dark mineral oil thickened by means of various kinds of so-called fillers, such as asbestos, cork and clay. Since it is impossible to see how such fillers can give to the grease any lubricating properties, such greases are not desirable. Such a grease is very much similar to that of Type (2) in that it possesses tacky and adhesive properties, is very elastic, and is of a fibrous nature. Soaps are entirely absent from this type of grease. The percentage of filler present can usually be determined from the percentage of ash found, but not always, for frequently a combustible filler is used, for example see sample 40.

Type (4) of the gear greases consist of a very heavy, dark mineral oil which is entirely free of a thickener of any type.

The following physical tests might be applied in the analysis of a grease, (1) Consistency, (2) Melting Point, (3) Change of consistency on heating, (4) Evaporation, (5) Flash Point, and (6) Viscosity of mineral oil used.

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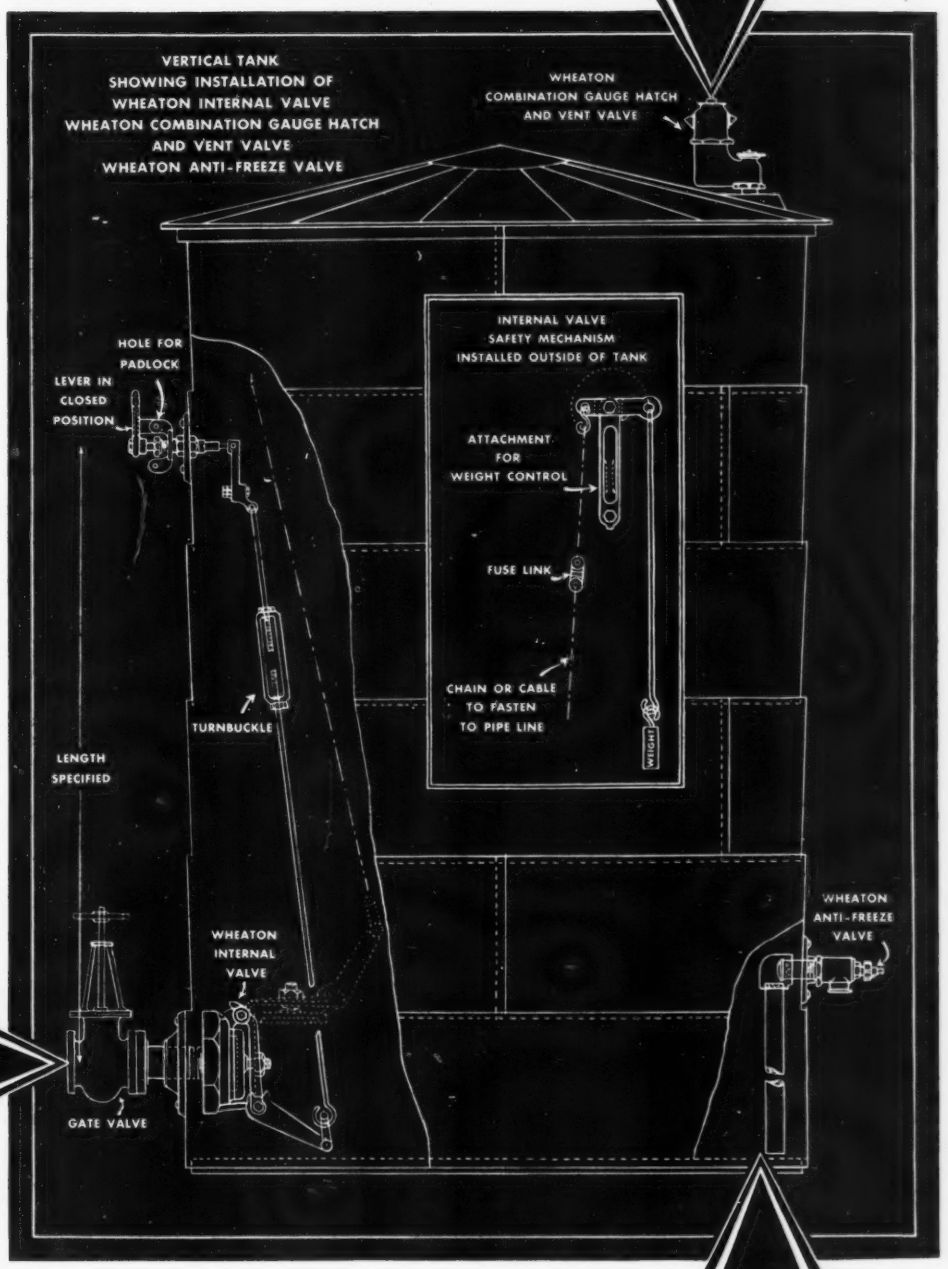

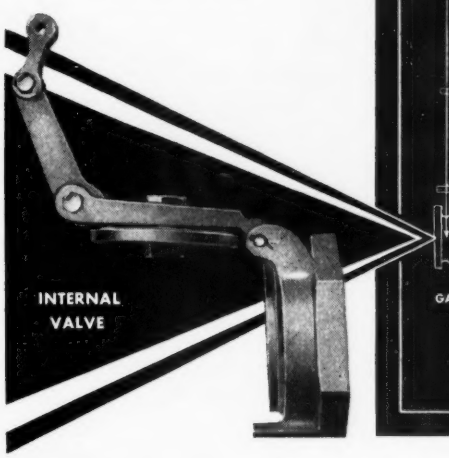

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Table 2

Composition of Gear Greases

Sample No.	Mineral Oil	Fatty Acids	Asphalt and Tar	Filler	Ash	Color
16	87.4	7.7	1.3	None	1.7	Dark
17	90.2	8.0	1.2	None	1.3	Dark
18	90.8	7.6	Trace	None	1.0	Dark
19	86.8	5.4	4.0	None	1.2	Dark
20	89.7	7.1	0.6	None	1.2	Dark
21	96.5	4.5	0.8	None	0.9	Dark
22	94.1	4.5	1.2	None	2.6	Dark
23	92.8	4.1	1.5	None	1.0	Dark
24	95.4	4.5	1.2	None	1.0	Dark
25	89.5	7.9	None	None	1.0	Dark
26	93.5	5.2	Trace	None	0.8	Dark
27	97.1	3.3	2.4	None	1.5	Dark
28	88.0	9.3	None	None	1.6	Light
29	78.5	8.1	4.6	6.4	4.5	Dark
30	87.0	6.7	0.8	None	1.3	Dark
31	84.1	7.8	Trace	None	1.3	Dark
32	87.5	8.4	Trace	None	1.4	Dark
33	72.1	2.7	25.6	None	0.7	Dark
34	86.5	3.9	6.7	None	2.8	Dark
35	90.8	Trace	7.3	None	0.8	Dark
36	92.9	None	0.9	6.2	6.0	Dark
37	98.0	None	1.3	0.7	0.3	Dark
38	94.3	None	2.3	3.4	3.5	Dark
39	86.2	None	None	13.8	13.4	Dark
40	89.7	None	None	10.3	1.7	Dark
41	80.5	None	2.3	17.2	16.5	Dark
42	99.2	None	1.2	None	0.1	Dark
43	98.8	None	1.4	Trace	0.3	Dark
44	99.0	0.9	0.7	None	2.3	Dark
45	99.6	None	1.3	None	0.2	Dark
46	95.0	None	3.9	None	0.1	Dark

Note: All determinations in % by weight. Trace denotes less than 0.5%.

been judged only by the appearance and feel of the grease. At the present time the A. S. T. M. Tentative Method for the Penetration of Greases and Petrolatum[4] proves very satisfactory as a method for measuring the consistency of cup or pressure greases, that is, greases of the type whose composition are similar to those given in Table 1.

This method is based upon the use of a penetration cone of standard dimensions and weight. With the use of a cone, lighter in weight than the one used for cup greases, this method may be used for determining the consistency of one type of gear grease, i. e., soap thickened mineral oil type which has a smooth and cellular structure, —Type (1) above, samples 16-32 in Table 2.

For greases which do not separate on heating, Type (2) above, samples 33-35, and very heavy dark mineral oils, Type (4) above, samples 42-46, the Saybolt Universal or Furol Viscosity[5] at 210 F. may be used as a measure of the consistency.

The method referred to above for use with cup greases proves satisfactory but the methods mentioned for use with the other types of greases are not entirely satisfactory. Also there are some types of greases whose consistency cannot be determined by any of the above mentioned methods, and therefore, there is at the present time a great need for a satisfactory grease consistometer.

GREASES do not usually possess sharp melting points, but it is possible to determine the temperature at which they soften sufficiently to flow under a small pressure, and it is this temperature that is designated as the melting point. Such determinations are of some value in the case of cup greases, but are of little importance in connection with gear greases. At present there is no standard method for making this determination, although there are many ingenious procedures in use. The method of Gillette[6] is found to be easily carried out and provides satisfactory and uniform results. A similar determination, the dropping point, which is usually a higher temperature than the melting point as defined above, may be determined as described in the A. S. T. M. Tentative Method for the Melting Point of Petrolatum[7].

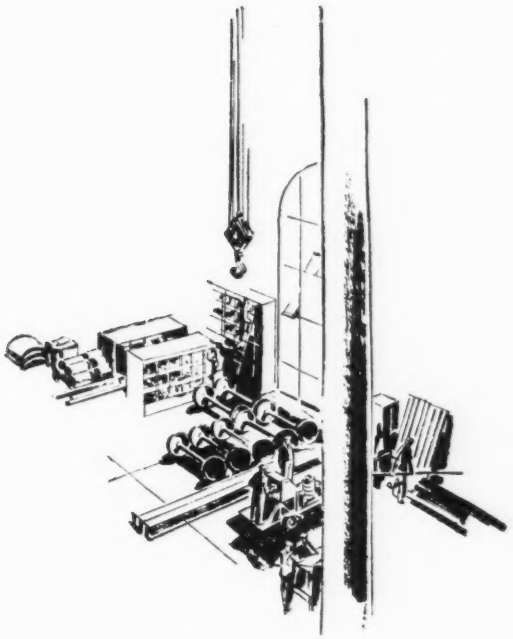
The effect of heat on the consistency of a grease is of some importance and may be determined by slowly heating a small quantity of the grease to 150-200 C, (302-392 F.), maintaining at the final temperature for about 30 minutes, and noting any change in the consistency of the sample which might have taken place. Similar results might be obtained by observing a sample of a grease during the determination of its flash point. Greases containing fibrous fillers, Type (3), Table 2, samples 36-41, separate on heating. Also, greases of the mineral oil soap thickened type separate on heating above 212 F., due to the removal of water, a small quantity of which is always essential to greases of this type.

An evaporation or volatility test may be made by heating 1 to 5 grams of the grease in a constant temperature oven which is maintained at 212-230 F. for one or two hours, and the loss in weight determined. Excessive loss of weight indicates either or both the presence of water or volatile mineral oils. The presence of oils, which are volatile at fairly low temperatures, in many types of greases makes it possible to use this method as a means of determining the quantity of water present.

Flash point determinations may be made with the use of any open cup tester, and give some idea as to the nature of the mineral oil used in the grease; the lighter or thinner the oil, the lower the flash point.

The viscosity of a small sample of the mineral oil, which has been extracted from a sample of grease, may be determined approximately by using a 5cc. pipette which is surrounded by a water bath and which has been standardized with an oil of known viscosity. The viscosity of mineral oils found in cup greases is usually determined at 100° F., while that of the heavier oils found in gear greases at 210° F.

The above mentioned tests, chemical and physical, if properly applied should give considerable information concerning



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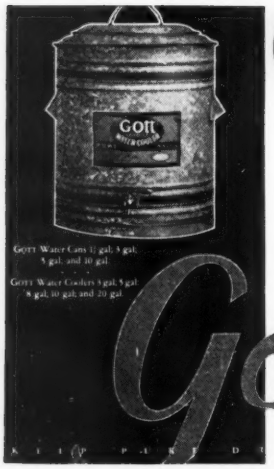

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the composition and the properties of any grease in question. It is hardly necessary to state that there is no need of submitting a single sample of grease to all of the above mentioned tests. The number and types of tests to be applied to a particular sample depends entirely on the nature of the material and for what purpose it is to be used.

Besides the literature to which references have already been given, the following books will be found to contain general information pertaining to greases and methods of analysis:

(1) American Lubricants—Lockhart—Chemical Publishing Co.

(2) Lubricating Greases—Klemgard — Chemical Catalog Co.

(3) Industrial Oil Engineering—Battle—J. P. Lippincott Co.

(4) Oil Analysis — Gill — J. P. Lippincott Co.

(5) Technical Methods of Analysis — Griffin — McGraw-Hill Publishing Co.

(6) Practice of Lubrication —Thomsen—McGraw-Hill Publishing Co.

Literature Cited

[1]Am. Soc. Testing Materials, Standards —1927, Serial No. D 128-27.

[2]Am. So. Testing Materials, Standards—1927, Serial No. D 95-24.

[3]American Lubricants — Lockhart — Chemical Publishing Co., Page 162.

[4]Proc. Am. Soc. Testing Materials 1927, Serial No. D 217-27T.

[5]Am. Soc. Testing Materials, Standards —1927, Serial No. D 88-26.

[6]Gillette, Ind. Eng. Chem., 1, 356, (1909).

[7]Proc. Am. Soc. Testing Materials, 1927, Serial No. D 127-27T.

East Texas Refineries Starting Up

TULSA, Dec. 29.—Reports here are that the Beacon Refining Co., Kilgore Refining Co., and Arrow Refining Co.. all small East Texas plants, have resumed operations after being shut down for several weeks, possibly due to the recent increase in the retail price of gasoline in Texas. Only small amounts of crude are reported charged to the plants, primarily to supply tank wagon gasoline trade in that vicinity and to supply fuel oil for drilling.

ADVERTISING PAGES REMOVED

Visiting Around the Refineries

By Arch L. Foster

THE Texas Co. has the honor of being the first member of the American Society for Testing Materials to become a Sustaining Member of that important body, which includes in its membership every large and nearly every small industrial organization in the country, as well as a larger number of individual members. The president of the society for 1930-31 was Dr. K. G. MacKenzie, consulting chemist of the company.

A Sustaining Member of this society contributes $100 per year as dues, which income is devoted to furthering the research and other activities of the society. It is particularly gratifying to the oil industry to know that the first organization to apply for and receive this class of membership is an oil company, leading the way for industries much older and better established, which are quite as active, and which receive quite as much benefit from the work of the society as does petroleum.

* * *

PLYKROME is the name of a new protective coating recently developed by Industrial Welded Alloys of Newark, N. J., under the guidance of W. C. Johnson, its president. This new departure is being applied to high temperature-pressure, and other corrosive conditions in oil refining by the company in collaboration with M. W. Kellogg Co., industrial engineers.

The new coating consists of a relatively thin layer of a high chromium alloy welded to a carbon steel base metal, as a lining for tubes, towers, reaction chambers and other refining equipment subjected to corrosive or erosive conditions. The exact manner of accomplishing the welding has not yet been disclosed, as the company wish to study the actual use of the idea in practical plant application more exhaustively before further discussion is indulged in.

The two-play metal can be rolled, bent, welded, or subjected to heat above 2000 F. for indefinite periods, without any weakening the bond between alloy and base metal, and shop experiments are being carried out on an exhaustive scale. Several installations in refineries are planned and in use, from the results of which the general utility of the idea can be determined with certainty.

* * *

RUMORS printed in the Wall Street Journal Dec. 18 state that several oil companies, among them the Cities Service Co., Sun Co., White Star Refining Co., and others, had representatives in Toledo that week, investigating the method for manufacturing, and the testing of a new gasoline "which does not produce carbon monoxide, and which is claimed to increase mileage."

No details of the process or of the nature of the motor fuel is available at this writing, except that the manufacturing process was developed by Dr. W. P. Winter. It may prove interesting to find out some of the details about a gasoline which does not produce carbon monoxide in a conventional internal combustion engine.

General opinion has it that such perfect combustion requires a huge excess of oxygen, which, when supplied as atmospheric oxygen, either reduces the mixture below the explosive limit, or causes a prohibitive loss in power. Opinions must be reserved however, until more is known regarding the nature of this new fuel.

* * *

R. G. JUHRE, of the service department of Universal Oil Products Co., is calling on Dubbs licensees in the southwest and expects to be in that region for two or three months in the interests of his company.

* * *

"FRACTIONATING and Absorption Problems," is the title of an interesting little booklet recently issued by the Leader Iron Works Inc., of Decatur, Ill., which discusses briefly the several important points in the design of a bubble tower and its accessories.

A new type of bubble cap and nipple, the Leader Combined Bubble Cap and Nipple, is shown in the booklet, and details of the design are explained. The cap and nipple are cast from a special alloy, the nature of which is not disclosed, integral, with a standard flange at the desired point on the nipple, which fits into a standard hole in the bubble plate. After the nipple is inserted into the hole a wedge key is inserted through slots below the plate and wedges the nipple rigidly in place.

Height, number, and spacing of teeth in the cap edge, and the height of nipple, clearance between teeth and plate floor, are determined in accordance with the details of the service to be obtained, and caps are built to meet these conditions. Replacement of caps can be accomplished merely by knocking out the wedge key and removing nipple-cap assembly, and replacing by another assembly.

* * *

GORDON GRANGER, superintendent of Barnsdall's Okmulgee refinery, is expecting to set a new record for continuous operation of a cracking plant. When last heard from the plant was still going strong after two months of continuous operation.

New Refining Patents

Catalytic Cracking. U. S. P. 1 822-861, Sept. 8, 1931, application filed April 13, 1927; Louis Burgess.

WHEREAS in prior practice the best obtainable yield of light distillate in the aluminum chloride process of cracking oils has been about 85%, it has now been found that yields of 95 to 99% can be obtained if the optimum conditions of temperature equilibrium are carefully maintained.

In order to accomplish this, the oil is preheated with an insufficient quantity of aluminum chloride; and the cracking operation is carried on in a still to which controlled amounts of fresh oil and aluminum chloride are regularly supplied, so that a constant condition of catalytic activity is maintained and there is a continuous evolution of light distillate of uniform composition. See also U. S. P. 1 822-862, of N. E. Loomis and L. Burgess.

What Is Claimed

Increasing the yield of gasoline in the aluminum chloride process of cracking, by maintaining a constant temperature at which distillate vapor is evolved, withdrawing the vapors, adding fresh oil to maintain constant volume, and adding active aluminum chloride to maintain constant catalytic activity.

* * *

Catalytic Cracking, U. S. P. 1, 822-862, Sept. 8, 1931, application filed May 7, 1927; Nathaniel E. Loomis and Louis Burgess, assignors to Standard Oil Development Co.

BASED on the observation that the efficiency of aluminum chloride catalyst for cracking oils is increased by operating at higher temperatures than customary in prior practice, a continuous process has been developed for carrying on the cracking reaction at 650-750° F. Since this is above the boiling point of the oils, it is necessary to apply pressure; and it has been found that the optimum pressure is greater than the vapor pressure of the charging stock, but less than that of the desired product, at the reaction temperature.

Fresh oil is fed into the still at a rate which maintains constant volume; fresh catalyst is supplied at a rate which gives constant evolution of distillate; and the low-boiling products are withdrawn gradually so that pressure relations are not disturbed. Thus the process is carried on continuously under equilibrium conditions. See also U. S. P. 1 822 861, of L. Burgess.

What Is Claimed

Cracking oil by heating it above its boiling point, to 650-750° F., in presence of active aluminum chloride, distilling the oil under pressure greater than its vapor pressure and less than the vapor pressure of the light distillate products at the reaction temperature, and withdrawing the vapors of the light products.

* * *

Vacuum Distillation. U. S. P. 1 822 733, Sept. 8, 1931, application filed Oct. 20, 1927; Audley E. Harnsberger, assignor to Pure Oil Co.

IN ORDER to prevent local overheating in the vacuum distillation of oils, a still is provided in which the vacuum applied at the outlet end penetrates entirely through the still to the oil inlet end.

This is accomplished in a tube still in which the cross-sectional area of the tubes is sufficient to minimize friction between the pipe walls and liquid or vapor; and a successive increase of total tube cross sectional area is provided by splitting the initial stream into new streams, each of like area with the first.

What Is Claimed

Passing oil through a hot zone in a stream of restricted cross section, splitting the stream into substreams, each of the same cross-sectional area as the initial stream, in such a way that the composite paths traversed by the substreams will have a capacity permitting 4″ absolute of vacuum, maintained at the discharge end, to penetrate to the inlet end of oil path.

* * *

Cracking With Cyanide. U. S. P. 1 822 127, Sept. 8, 1931, application filed April 29, 1930; John Collins Clancy.

IN the inventor's prior U. S. P. 1 658 116 a process is disclosed for cracking oil in presence of a catalyst and of a molten cyanide of an alkali metal. The molten cyanide serves to dissolve deposited carbon from the cracking reaction; the magma thus formed is drawn off and filtered, so that the molten cyanide may be used again. But losses and hazards were encountered in operating this process, on account of evolution of poisonous hydrogen cyanide gas.

A composition has now been found which not only eliminates this hazard, but also permits a reduction in the amount of cyanide used and gives better than 50% yield of aromatic hydrocarbons, and 20% of gasoline, without excessive formation of carbon or fixed gases. A desulfurizing effect is also obtained.

What Is Claimed

Cracking oil in presence of a molten catalyst made by treating with ammonia, at cyanide forming temperature, the cyanide-containing residue from cracking oil with a molten mixture of alkali metal cyanide and alkali metal carbonates, the carbonate being present in amount sufficient to prevent liberation of hydrocyanic acid from the molten catalyst.

* * *

Refining Cracked Vapors. U. S. P. 1 818 513, Aug. 11, 1931, application filed Feb. 17, 1928; Joseph B. Weaver and Cary R. Wagner, assignors to Gyro Process Co.

THE principal obstacle to successful vapor phase cracking has been the difficulty of controlling the reaction and effecting a thorough recovery of the desirable cracked products. Owing to the high anti-knock value of gasoline made by vapor phase cracking, control of the cracking operation and effective refining of the products have considerable commercial importance.

Improvement both in control and in refining of products has been accomplished by a novel process in which the vapor, admixed with steam, is heated above 1000°F. and the cracking is halted at a desired point by sudden cooling below 600°F., after which the portion still remaining as vapor is passed through a bed of filter material to remove objectionable impurities. The steam which remains in this vapor is a valuable aid in this refining treatment; and it is an important feature of the new process that the filter operation is conducted in such a way that only a fraction of the unsaturated hydrocarbon material is removed. That part of the total unsaturates which is objectionable (causing gum formation, low stability and discoloration) is only a small part of the total unsaturates, and the anti-knock value of the gasoline depends largely on the presence of the desirable part of the unsaturates. Hence those refining processes which are directed toward complete or nearly complete removal of unsaturated compounds are deleterious to the final product.

What is Claimed

Treating cracked distillates to remove only excessive undesirable unsaturated compounds which produce gums and discoloration, the treatment comprising introducing vapor of the cracked oils, admixed with steam, into a confined polymerizing zone, effecting in this zone intimate contact of the vapor mixture with a finely divided solid adsorbent catalyst, the steam being present in such proportion as to cause polymerization of about 25 per cent of the total unsaturates which would be polymerized in absence of steam, the remainder being unpolymerited and thus present in desirable increased amount over that present in the original oil vapors charged to the polymerizing zone, removing the material from the polymerizing zone and separating the vapors from the high boiling oils containing the polymerized undesirable compounds.

SPECIAL EQUIPMENT MADE TO ORDER FOR

OIL REFINERIES

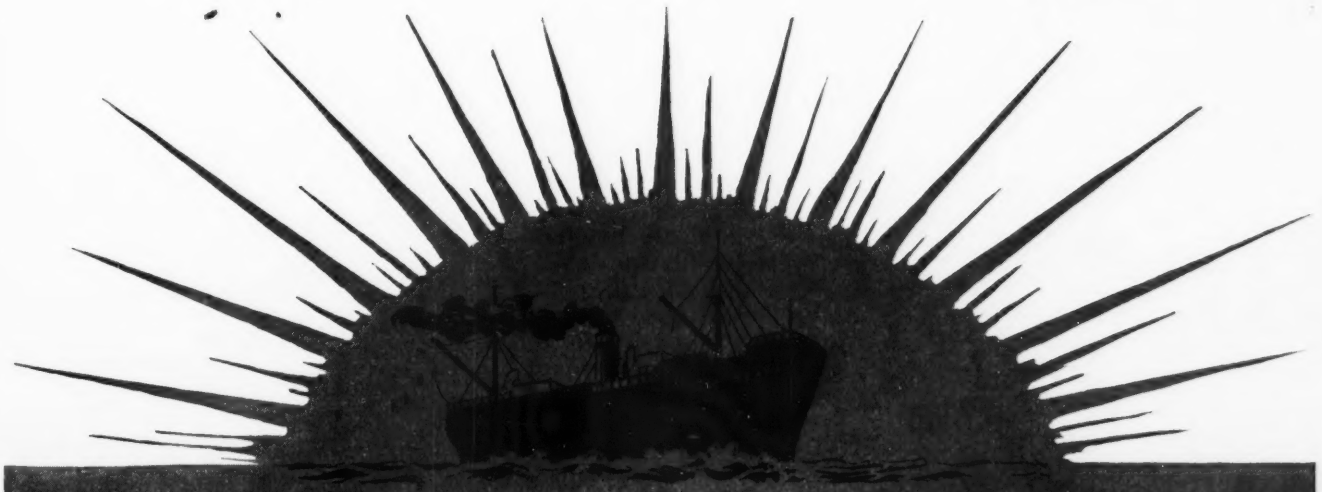
TOWERS—STILLS—HEAVY TANKS—CONDENSERS
SPECIAL FABRICATED STEEL & PLATE WORK
SPECIAL MACHINERY
ANY EQUIPMENT FOR YOUR INDIVIDUAL NEED

Rail or Water Shipments

Estimates on Request

It Pays To Have Equipment Well Made

We Build only The Best



SUN SHIPBUILDING & DRY DOCK CO.
CHESTER, PA., U. S. A.
NEW YORK **PHILADELPHIA**

SELLING BATTERIES AT GASOLINE STATIONS

Points in Servicing and Merchandising That Allow the Station to Handle This Automotive Line Profitably

By E. L. Barringer
N. P. N. STAFF WRITER

Article II

SERVICING an automotive storage battery requires a trained personnel. The man at the service station in charge of the battery department should be a seasoned battery man. If such a workman is not connected with the company, or cannot be employed, a mechanically inclined employe should be sent to the battery manufacturer's training school, in the experience of many station operators.

Many one-stop service stations have combined the mechanical work of the tire and battery departments under the same personnel. This is a logical merger of work. Tires are in greatest demand at the dull battery season.

An employe with a merchandising bent, as well as mechanically inclined, is best adapted to servicing batteries, as this is a replacement sale and the customer is in the buying mood when having his old battery tested. But first of all the employe must know his batteries and the electrical system of the automobile.

Unfortunately, there has been too much shoddy work in battery servicing. This condition is being remedied. The reputable battery manufacturers, distributors, and retailers are all working to this end. In fact, the better manufacturers urge, and the better dealers follow the practice, of not opening a battery unless the car owner is present.

The repairing of batteries was once a profitable part of servicing, but today this department has virtually passed away. Once a cell goes bad the gamble on a repair job is too great. In the old days, when batteries retailed at $50 the car owner was justified in wagering a few dollars on cell rebuilding. Present low retail prices on new batteries bring a cell repair job within a third of the cost of a new one.

A car owner ordering a cell rebuilding job may be starting weeks of trouble and in the end have to have all three cells rebuilt, which amounts to buying a new battery. Consequently, battery sales agencies are reluctant to repair batteries, and prefer to recommend the purchase of a new one.

The major servicing today is that of recharging the battery. This service costs the car owner a few dollars. Rates for recharging vary from 50 cents to about $1. Batteries are rented at 25 cents a day. Two days rental usually are required for recharging a battery.

There are two types of battery chargers: the rectifier, and the constant potential charger. Radio owners of five years or more ago who had the old battery sets remember their home chargers—these were rectifiers. The rectifier charger feeds electricity to the battery at the rate at which the battery will take it. The constant potential charger has a set flow of current which is jammed into the battery.

Some battery shops advertise eight-hour, or one-day recharging. Experienced battery service men consider this too fast a job.

The cost of small rectifiers, for recharging several batteries would be from $5 up, and larger chargers would cost from $150 to $175. A constant potential charger costs about $350.

In addition to the recharging machines, other tools required for servicing are hydrometers to test the density of the electrolite, distilled water, volt meters, a battery analyzer to show the condition of each cell, and

New Batteries for Rentals

RUSSELL HARP, one-stop station operator in Akron, uses only new batteries for rentals. Each fall he sells the old rental batteries to used car dealers, and places new batteries in service.

Here is his reason for using only new batteries. When anything goes wrong with a customer's battery the customer naturally is not in a pleasant frame of mind.

If a rental of questionable strength is placed in his car, while his own battery is being recharged, more trouble may develop and the customer becomes more disgruntled.

Mr. Harp puts a good battery in as a rental so the customer will have no more trouble. This, he believes, builds customer good will by making a favorable impression at a time when the customer appreciates most a superior battery service.

cables and terminals for replacements.

Testing machines range in price from $2.50 for a hand tester to about $65 for larger machines.

For rental service new batteries are considered better than old ones rebuilt. An experienced one-stop station operator, with over 300 rentals in service, has followed this policy. Each autumn he sells his rentals for service in used cars, and places new batteries on duty.

His reason for using only new batteries is this. When a customer's battery goes dead, and it needs recharging, the customer already is in an unpleasant frame of mind. Batteries do have a habit of going dead at unseasonable times, like the dead of night, or the morning that one has overslept and is in a hurry to get to the office.

If the rental battery installed is of questionable strength, and it too runs down, the customer is all the more disgruntled. This one-stop station merchandiser makes sure that only live batteries are put out as rentals, to build good will for his station.

A battery will be defective for three reasons. First, a cracked separator. Second, buckled plates. Third, shedding, the building up of a deposit in the bottom of the case until it reaches the plates and causes a short circuit.

Another successful one-stop station operator determines the cause of failure of a new battery by opening it and has established the following rule for adjustments: If separators have cracked, he adjusts the sale free of charge. If the battery is shedding, he makes an adjustment on a new battery. If the plates have buckled, he endeavors to educate the car owner that the cause of this condition is neglect of the battery, or it has been overcharged.

If the car is equipped with the correct size battery, with the electrical system in working order, and the battery given attention as to its water level and cell testings at least every two weeks, the battery should give good service for several years.

The life of a battery is conditioned upon many things and adequate knowledge of all these factors is required for proper servicing. The generator, for example, may not be charging, or its charging rate too slow or too fast. Recharging of the battery, or installing a new one, is only a temporary remedy. Before either remedy is applied the cause of the trouble must be uncovered, and corrected. Only then will the customer get satisfactory service out of his battery, and the service station gain his good will.

Unless the oil marketer is prepared to have a trained battery man on his pay roll, it will be more profitable not to attempt to sell batteries, many station operators believe.

Letter Press Straightens Plates

A DISCARDED letter press, and some thin pieces of steel are used for straightening battery plates in the one-stop station of L. Essman & Son, Newark, Ohio.

When the wood separators are placed between the plates before straightening, the separators may become cracked.

Mr. Essman acquired the letter press without cost when an office in Newark was dismantled. The thin pieces of steel are the same size as the plates. One or more steel plates are used to form the thickness of the separator.

With the steel plates in place the letter press is turned down on the battery plates for straightening, then the wood separators are inserted.

The Market; How To Reach It

The market for batteries and battery recharging is at its peak during cold weather months. Demands for electricity are greater than in summer months. Cold motors require more electrical energy for starting. Shorter days increase electrical requirements for lights.

In recent years the battery is given greater work, especially during the winter months, through the use of more appliances. There is greater use of the windshield wiper in winter. Then, defrosters for the windshield, using electricity, have come into great favor in the past two winters. Hot water car heaters, with a motor to operate the blower, are being sold in greater quantities now. Also, there are cigar lighters, and sometimes additional front or rear lights.

Batteries and tires are considered good teammates for the one-stop service station. Their peak seasons dove-tail. While tire demand is light over the winter, batteries are in good demand. Then in the summer batteries are at low ebb, while tires are selling rapidly. Through this adjustment of the seasons the mechanical work in the tire and battery departments at many one-stop stations is under the direction of one workman.

As the average life of a battery is from 18 to 24 months, a conservative estimate of battery sales in a community annually is about half that of the car registration. Some car owners seldom buy batteries, as they trade in cars before they are in the market for a replacement battery, but the old car will be sold to some one and the new owner becomes a prospect.

Another method for estimating battery volume is the ratio of one battery to every five tires sold.

In order to merchandise batteries an aggressive sales plan is needed, in addition to a properly trained personnel for servicing.

There are three parts to every battery sale. First, the service before the customer buys, the analysis of the customer's needs. Second, service of the sale, proper installation, checking the strength of the new battery, inspection of terminals and cables, a check of the electrical system for any defects, and the proper fastening in the carrier. Third, service after the sale, the regular checking of the water level, and the hydrometer testing so the customer gets all the service built in by the manufacturer.

A workable, regular inspection service builds a customer list for a battery department, and builds customer confidence in the station. Some stations charge 25 cents for a battery in-

spection and watering job, but most stations offer this free.

Customers should be urged, and sold on the idea, of coming in every ten days or two weeks for inspection of the battery. For the station already selling batteries this merchandising practice will build sales. For the station just starting a battery department it will be the basis of successful merchandising.

This inspection service also has the advantage of attracting customers to the station and they may buy other merchandise.

At each inspection the condition of the battery should be noted on the customer's record card, date of the inspection noted and the hydrometer reading of each cell recorded.

Merely filling in a record card every two weeks is of little value in itself. The record must be studied, and used in selling.

With the record card in his hand for filling in the latest information, the workman can make a swift analysis of the condition of the battery. If there are indications of trouble he should tell the car owner.

The need for a recharging may be indicated by the lower hydrometer readings, and the employe can turn in a small sale and save the car owner the trouble of finding a dead battery in his car some morning.

If the customer cannot be sold on the spot, the employe should fill in a form giving the name, address, trouble with battery, and reason for not buying. This should be passed into the office for a salesman to follow up.

Besides leading to actual sales, this service will build the customer's confidence in the station. An intelligent servicing of the battery, with an honest report on its condition, will tie that customer to the station. When the customer needs battery service he will naturally think of the station that gave him intelligent service.

A battery business cannot be developed in the service station, in one month, or in two months. **At least one year is required to develop a battery department, and to sell the public on buying batteries at the service station,** in the opinion of station operators experienced along this line.

Following is a suggested plan for merchandising batteries for the oil marketer, assuming that the marketer is just starting to carry this equipment.

Large space should be taken in the local newspapers, or local magazines, announcing that the Blank Oil Co. now is selling batteries. The announcement should be as straight forward as possible to tell the public the station is selling batteries.

Follow up this announcement with a direct mail campaign. Every car owner in your city is a prospect. The first piece should be a repetition of the newspaper announcement—that you are selling batteries now.

Then advertise your battery inspection service. If your newspaper advertising appropriation will stand it, use space exclusively for this idea. If not, a box can be inserted in your regular gasoline, motor oil, or lubrication service advertising.

Send more direct mail pieces on this inspection service idea. At least three direct mail pieces should constitute the campaign, one as the announcement, and two more to sell the inspection service.

In telling the public that you sell batteries play up your telephone number. Every big station has a service car, either a small truck or a motorcycle. Tell your prospects that, if they call your number, or your nearest service station, the service car will answer this call promptly. Your whole idea is to get car owners to think of the Blank Oil Co. as a place to buy batteries as well as Joe's battery shop or Bill's garage.

Don't advertise a battery inspection service unless you have one. Inspection service is more than removing the plugs and squirting a little water into each cell every ten days. Inspection service is merchandising. Put on a show that makes the customer feel you are as interested as he in that battery. Inspection service will tie a customer to a station so that selling the new battery is mere formality.

When you register a customer for inspection service put his name, address, and make of car at the top. In the upper left or right hand corner note the license number. The last two numbers of the license will be the key for looking up the card on following visits.

All license numbers ending in 85, for example, will be together, filed in order of the preceding figures. This system provides an easy method for finding registration cards, and it is not necessary to keep asking the customer his name.

After the first week, when the customers start returning for inspection, look up the customer's card before starting inspection. The employe will know the customer's name, and will have before him a record of previous inspections.

Then talk to the customer while you are inspecting his battery. The worth of the employe depends as much upon his ability to talk as it does on his ability to use the hydrometer. Show the hydrometer to the customer, and read it with him. Don't assume the customer knows all about it, or that he knows nothing. **Think out loud** for the benefit of the customer.

If the terminals need greasing tell the customer so, and explain why you grease them while doing the job. Let the customer see you mark down the readings for each cell. Make some comment on the condition of the battery. If it is good, go down the list of readings and tell him. If one cell is beginning to weaken, show the customer the continual declining reading and tell him what it means.

Don't talk over the head of the customer when selling a battery. Most car owners know very little about a battery, especially women. They do not like to ask questions that may seem silly. Looking intelligent, and seeming to understand, may be only a pose.

It is not necessary, either, to presume that every customer is ignorant, and that a sketchy education must be given with each sale. Strike the middle ground.

Have a battery on the counter with a corner cut away. When you mention plates touch them. Maybe the customer has never seen one, and does not know a plate from a separator. When you mention separators touch them. When you mention connectors, or terminals, touch them.

In selling the new battery never quote prices out of your head. Always consult the price

(*Continued on page* 56)

How One Oil Company Cut Mileage Costs And Added to Life of Its Autos

By Allen S. James

N. P. N. STAFF WRITER

TULSA

ONE hundred thousand miles in one automobile at an average operating cost of 4.53 cents a mile!

That is the record of F. J. Hill, the first member of the Mid - Continent Petroleum Corp.'s "Diamond 100,000 Mile Club"—an organization formed by the motor transport division—to complete the necessary mileage to make him eligible for a certificate of award from the corporation's president.

Included in the average of 4.53 cents a mile are gasoline and oil at the retail prices; tires; tubes; tire and tube repairs; washing and polishing, some of which is done in the company's garages and some outside; painting; storage; licenses; insurance; all mechanical repairs; overhead and supervision including garage and office rent, foremen's and supervisors' salaries prorated over the company's cars and trucks by divisions. It does not include depreciation which in the case of this car would be a little less than 1.5 cents a mile over the 100,000 miles.

Mr. Hill, who is in the land and scout department of the corporation rolled into Tulsa Christmas Eve in his Buick coupe with 100,007 miles to his credit since the car was assigned to him back in 1929.

This honor will be held solely by Mr. Hill for only a week or two. At least four other members of the club will go over that mark before the middle of January, since all of them had more than 90,000 miles to their credit Dec. 1. They are:

C. F. Grant, land and scout department, with 94,000 miles; Allen J. Watt, land and scout department in Texas, 92,000 miles, H. R. Blake of the right-of-way department 92,000 miles, and C. A. Siggins of the production department, 90,000 miles on Dec. 1.

Other members of the club who are expected to complete their 100,000 miles before the end of the first quarter of 1932 are:

L. I. Trombly, eastern division, marketing department, who on Dec. 1 had 80,000 miles; A. E. Pierce, production department, 87,000 miles; A. G. Rey-

FORM M-81-10M-1-3 PETROL

Grades: A. Good; ½ Fair; ¼ Poor; D. Bad. Leave items not applying blank. R. M. indicates repairs made. Put check in this column where repairs are made. Use reverse side for remarks

Mid-Continent Petroleum Corporation
Motor Transport Department
MOTOR VEHICLE INSPECTION REPORT

No. of Vehicle: 314

Motor No. KB. 2371	Location Ft Smith	Date 8-14-30
Serial No.	Driver W R. Caeut	Make & Year Dodge
Division Southern	Speedo Mileage 32795	Type Tank

Condition of	Grade	RM	Condition of	Grade	RM
MOTOR	a		TRANSMISSION OIL LEVEL	a	
Main Bearings	a		Gears & Adjustment	a	
Connection Rod Bearings	a		Bearings & Adjustment	a	
Pistons Pins Rings	a		DRIVE SHAFT & Universals	B	
Valves Tappets X	a	X	DIFFERENTIAL OIL LEVEL	a	
Timing Gear or Chain	a		Ring Gear & Pinion	a	
Oil Pump & Pressure	a		Bearings & Adjustment	a	
Oil Level	a		Rear Wheels	a	
STARTER	a		Bearings & Adjustment	a	
Generator & Ammeter	a		FRONT WHEELS & Adjustment	a	
Ignition & Wiring	a		Bearings & Adjustment	a	
Magneto—Dist.—Timer	a		Spindle Bolts & Bushings	B	
Spark Plugs	a		Tie Rods & Bushings	a	
Coils	a		Drag Link & Adjustment	a	
Starting Crank or Cover	a		Steering Case Cover	a	X
BATTERY	a		BRAKE & Drums	a	
Fasteners Carrier	a		Service & Adjustment X	a	X
Terminals	a		Emergency & Adjustment	a	
Water Level	a		TORQUE ARM OR RADIOUS RODS		
Head-Dimmer Lights	a	X	SPRINGS & Center Bolts	a	
Ignition Light Switch	a		Front & Rear	a	
Dash Light	a		Spring Clips & Rubber Bumpers	a	
Tail & Stop Light	a		Shackle Bolts & Bushings	B	
GASOLINE TANK & LINES	a		FENDERS & Splashers	B	
Vacuum Tank or Pump	a		Running Boards & Brackets	a	
Carburetor & Adjustment	a		BUMPERS Front Rear	a	
RADIATOR & HOSES	a	X	LICENSES & Brackets	a	
Water Pump & Packing	a		FRAME & Cross Members	a	
Fan & Belt	a		OPERATORS' TAKE NOTICE PLATE	a	
CLUTCH	a		LUBRICATION OF CAR COMPLETE	a	
Pedal Adjustment	a		PAINT: Truck Tank	B	

Shock Absorbers		Tire Carrier	a	Windshield Glass	a		
Body or Cab	B	Rims & Lugs	a	Windshield Wiper	a		
Upholstery	a	Skid Chains	a	Speedometer	a		
Top	a	Tools	a	Horn Mirror	a		
Door Glass—Curtains	a	Fire Extinguisher	a	Governor 30 Miles	a	X	

TIRES	Make and Size	Serial Number	Grade	Air	Condition of Car
Right Front	32 16		a	100	Good good
Left Front	" X "		B	100	Fair
Right Rear	34 x 7		a	100	Poor
Left Rear	" X "		a	100	Bad
Spare			B	100	Value $

If extensive repairs are necessary, give estimated value of car.

Is car receiving proper care, lubrication, etc? Yes Inspected by R C Wynn.

By the time the company mechanic inspects all the parts listed on this report blank and writes in the grade or condition of the equipment, one would be safe in saying "the inspection was thorough"

MID-CONTINENT PETROLEUM CORPORATION

Motor Vehicle Monthly Operating Report

Car No.....

Month Ending....., 193.....

Where used

What kind of work

No. of days operated during month

" Times Completely greased during month

" " Crankcase oil changed during month

" " Water put in battery during month

" New tires for month

" " tubes for month

Miles traveled during month

Total Speedometer Reading

	From Co. Pumps	Purchased Outside	TOTAL
No. Gallons Gasoline Used			
No. Quarts Oil Used			

General Condition of Car:

Driven by.....

Mail address.....

Approved by.....

Fill in This Report Promptly at End of Each Month, Forwarding Original to Motor Transportation Office, Box 2025, Tulsa, Oklahoma.

Monthly report each operator of a motor vehicle owned by the Mid-Continent Petroleum Corp. must send to the motor transport division

nolds, sales department, 83,000 miles; B. H. Allison, production department, 70,000 miles; E. D. Murphy, safety department, 69,000 miles; C. D. Doris, sales department, 73,000 miles; C. E. Myers, sales department, 66,000 miles.

G. W. Showalter, production superintendent, 70,000 miles; Homer Hook, sales department, 63,000 miles; O. Mannschreck, land and scout department, 68,000 miles; Jess Scarborough, land and scout department, 70,000 miles; P. J. Adcock, sales department, 62,000 miles; R. C. Kroy, sales department, 62,000 miles; C. C. Crockett, sales department, 64,000 miles, and A. E. Deen, gasoline department, 76,000 miles.

The "Diamond 100,000-Mile Club" was organized early in 1931 by R. F. Fike, general manager of the motor transport division of the corporation, to stimulate co-operation among the drivers of the corporation's motor vehicles during—as Mr. Fike expressed it—"these present times."

"It had been our policy in the past," Mr. Fike said, "to operate Ford units approximately 35,000 miles, Buicks 50,000 to 60,000 miles and Dodges 40,000 to 50,000 miles, and then trade them in.

"We realized at the beginning of 1931, however, that we were going to have to get along with more miles per unit. It was our belief that the 'horse miles' were put into the automobiles by the manufacturers, and we accordingly worked on the theory that we could get those 'horse miles' out of those cars if we put 'horse sense' into our drivers."

Mr. Fike, accordingly, notified the operators of the motor vehicles that there would be no new automobiles this year unless absolutely necessary. He drafted more stringent rules with reference to the operation of the corporation's equipment. One of the rules was that no "personal miles" could be put on the machine. Another was the rigid rule that no member of the driver's family could operate the equipment, and no one but the man to whom the equipment was asigned could operate it. This rule was made so rigid that dismissal was the penalty for violation.

To keep the members of the club interested, Mr. Fike reported monthly to each man his expenses for that month, together with the accumulated expense for the year to the date of the letter.

Each man receives a letter from the transport division, in which are listed his expenses for the month, the number of miles traveled that month and the cost per mile; and the accumulated expenses, the accumulated miles and the cost per mile for that accumulated period. He knows at the end of the year just what his unit has cost.

The transport division maintains a record of average costs of operating various types of equipment, and the drivers who were under that average for the month were complimented. The drivers who were over the average were urged to watch their expenses a little closer.

"In that way," Mr. Fike said, "we have been able to keep the low average man working hard to keep that low record, and have kept the high man working even harder to get down to the lower figure—the result to the company being a general lowering of the average."

Mr. Fike's department also has a scoring system in connection with the expense of operating the car, and the mechanical work to keep it in condition. Each month an operator must take his equipment to one of the company's division points

It costs less

TO OWN A FRUEHAUF

Ten years or more after you have purchased your Fruehauf Trailer, you will still be crediting profits to it and probably wondering when the maintenance costs are going to begin. Fruehauf Trailers are built to earn and to keep on earning, year after year after year. And they are so designed and built that they keep piling up profits with scarcely any maintenance or upkeep expense—barring accidents, of course.

Another important point in considering new equipment—Fruehauf Trailers are designed, built and equipped to a high modern standard of excellence and not to a price. You get every modern improvement, every proven feature, every necessary piece of equipment when you purchase a Fruehauf. There are no makeshifts to regret—no extras to buy afterwards.

Yet it is surprising how low Fruehauf prices actually are—how easy it is to purchase a Fruehauf Trailer. . . . It is real economy to buy a Fruehauf. It is economical to operate one. It is profitable to own one.

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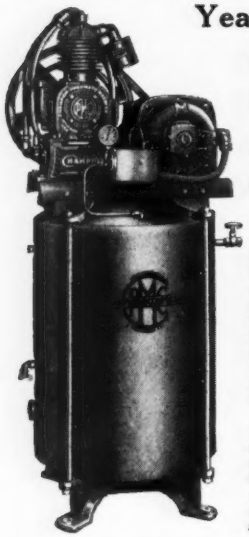

Make a resolution NOW to eliminate compressor troubles and needless expense by installing a CHAMPION Upright Model—the "last word" in compactness, dependability and economy.

It has the basic, exclusive features that made the name CHAMPION famous...it saves money both in first and operating cost ...it saves space—three models require only 4½ sq. ft.; the other only 5 sq. ft. Displacements range from 7.2 to 20 cu. ft. per minute.

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45—46—47
W. W. KEROSENE

Also
Naphthas and Gasolines
To Your Specifications

Write us

SUPERIOR OIL WORKS
Warren, Pa.

A hundred thousand miles with one automobile—and R. F. Fike (left), general manager of the Mid-Continent Petroleum Corp.'s motor transport division, is congratulating R. J. Hill, of that corporation, for being the first member of the "Diamond 100,000-mile Club" to drive his unit that distance. The car also is shown

where a company mechanic inspects the equipment thoroughly and makes out a detailed report. The mechanical superintendents in charge of the garages at these division points are men who have been thoroughly trained in the corporation's repair shops and promoted because of merit.

Once a month the driver of the equipment must report the expenses and the miles traveled, together with the volume of gasoline and oil, and the number of tires used.

If both the inspection record and the sales record are received promptly the operator of the equipment makes a score of 100, and is complimented for his promptness.

When both these reports are received, the transport division has an accurate record of the automobile. Herewith are published a copy of the report the operator must fill out, and one the mechanic making the inspection must send to headquarters. It will be noted that the air pressure in the tires is given particular attention. "That is one thing," Mr. Fike said, "that we insist upon—the proper air pressure in the tires."

The expense accounts are sent first to the auditing department, and handled by what Mr. Fike terms a "master control." The expense accounts in the auditing department must check to the penny with the expense record maintained by the transport division. In this way there is no chance for error in computing cost of operation of any of the units.

One of the first questions in the mind of the writer in discussing the "100,000-Mile Club" was the cost of operating a vehicle after 50,000 or 60,000 miles, as compared with the cost before that mileage was reached.

"That shows a surprising fact," said Mr. Fike. "The cost of operating Buicks so far this year has averaged 4 cents a mile, the cost of Cadillacs 4.3 cents, Dodges 3.1 cents, and Fords 3 cents a mile.

"Of course, it must be kept in mind that we bring in the equipment usually after 50,000 or 60,000 miles and completely overhaul it. Mr. Hill's car was completely overhauled at 73,000 miles. But by having our own mechanics to do the work and with them knowing they have the time to do a thorough job, and never allowing anyone but our own trained mechanics to handle the repair work, we have been able to keep that cost per mile down.

"Mr. Hill's car, by way of example, cost 4.4 cents per mile the first year he operated it—in 1929. The second year—1930—the cost per mile was 5.2 cents, but in 1931 4 cents. Mr. Hill operated the car 28,500 miles in 1929, and 26,500 miles

in 1930. He put the other 45,000 miles on that car in 1931."

Mr. Fike declared that the record of the transport division could not have been established had it not been for the fact that his men were kept constantly interested in making the department operate at the lowest cost possible.

"It might appear on the surface that we spend a lot of money needlessly on records, for we do have a complete record of every piece of motor equipment, but we have found that the money spent on the maintenance of these records is an economy in the end. Through these records we have been able to reduce the expenses of the motor transport division $200,000 in the last five years. Five years ago we had only 181 motorized units, whereas we now have 585 units."

While the writer was interviewing Mr. Fike his phone rang. He picked up the receiver, listened a minute, and then said: "That will be all right, Joe. That is legitimate."

He hung up the receiver, and said:

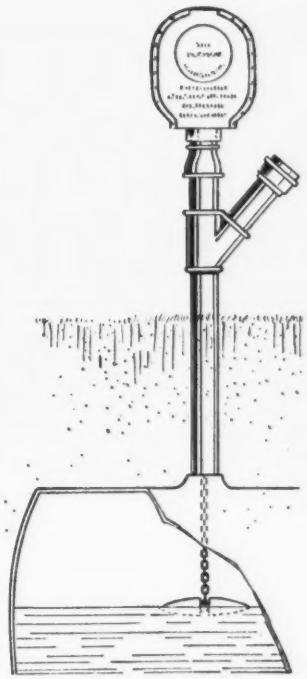
"There is an example of how we have trained our men NOT to think that any expense is legitimate 'because the company's paying for it.' "

"That man is out on a lease. Not long ago he had his car greased, paid for it and put it on his expense account. We told him that expense was not a legitimate one, that it should have been greased at a company garage.

"He is operating a tractor out there today, and he needed some kerosine. But before he bought that kerosine he called in to get official approval.

"We have certain rules, and all must abide by them. We do not permit the 'dolling up' of a piece of equipment at company expense. We equip them all alike when we turn them over to the men, and if they want something extra which they think will be of more comfort to them, they can have it installed—AT THEIR OWN EXPENSE."

"And that," concluded Mr. Fike, "Is the way we have been able to get so many of our men near the goal in the '100,000-Mile Club' at such a remarkably low cost per mile."



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No sir, you can't turn your back on all this hue and cry about "octane rating". But why should you try? Join up, and make your competitor black and blue in the face with Silencer 65-70.

It doesn't take car owners long to tell the difference, either. Tell them what you have, sell them a filling, and watch them roll back for more.

ALL the specifications are right: Speedy volatility, plus 25 color, O. K. to the doctor and corrosion, and stable all the time.

Which side of the fence will you be on? Turning your back on high octane gasoline, and cussing the competitor who has it? Or having it, and smiling as the business rolls in. Get in line now, contract or no contract (but that contract is a sweet one). Call up. Write. Wire. Now.

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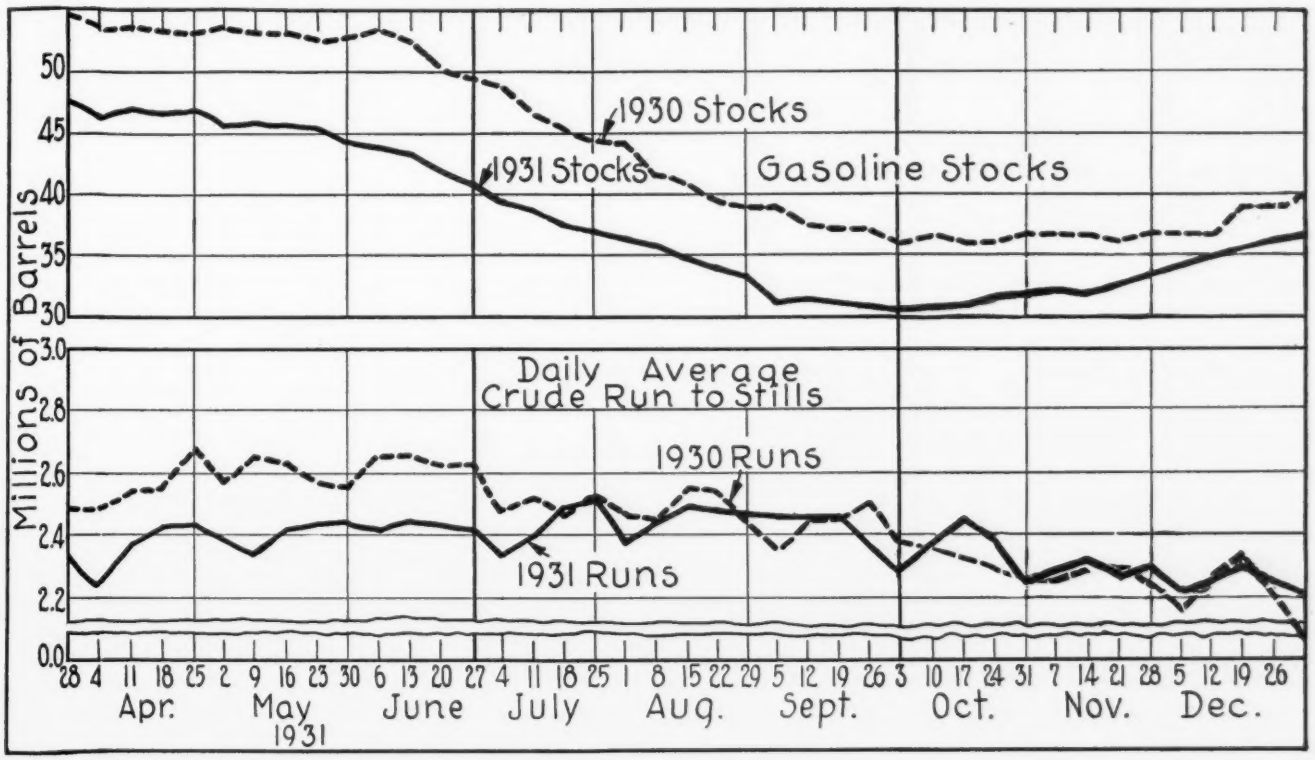
U. S. Crude Runs and Gasoline Stocks as Reported Weekly by A. P. I.



Reduction in Refinery Crude Runs Continues

By Telegraph
NEW YORK, Jan. 5

REFINERS reporting weekly to the American Petroleum Institute continued to reduce their scale of activity in the week ended Jan. 2. Another 30,300 barrels was cut from daily average crude runs to stills bringing the level down 110,000 barrels daily average below the runs maintained in the week ended Dec. 19.

The cut in runs failed, however, to halt the rapid rate at which gasoline stocks have been rising in recent weeks. Refinery stocks Jan. 2 were 790,000 barrels higher than on Dec. 26, and bulk terminal and in transit stocks rose an additional 740,000 barrels.

Three districts were able to draw on gasoline stocks. Oklahoma-Kansas refiners reduced their stocks 194,000 barrels, Appalachian refiners 4000 barrels and East Coast 2000 barrels.

Texas refiners added 394,000 barrels to storage despite a cut in crude runs of 42,100 barrels daily average. California refiners increased their crude runs 14,600 barrels daily average and pumped 205,000 barrels more gasoline into their already bulging tanks.

Indiana-Illinois refiners failed to reduce their crude runs to stills and as a result added 235,000 barrels of gasoline to storage.

Fuel and gas oil stocks are showing little tendency to drop during the winter season. In the week ended Jan. 2 the stock reduction in heavy oils was only 64,000 barrels to 132,477,000 barrels.

Current Refinery Operations

Districts	Per Cent Capacity Reporting	Daily Average Crude to Stills (Barrels) Week Ended		Per Cent of Reporting Capacity Operated Week Ended		Stocks (Thousands of Barrels) Gasoline		Gas & Fuel Oil		% Cracked of Total Capacity Reporting	Gasoline Production Daily Av. Production (Barrels) Week Ended	
		Jan. 2	Dec. 26	Jan. 2	Dec. 26	Jan. 2	Dec. 26	Jan. 2	Dec. 26	Jan. 2	Jan. 2	Dec. 26
East Coast	100.0	462,300	453,100	73.0	71.5	4,478	4,480	8,038	7,912	94.0	96,300	92,300
Appalachian	91.8	75,100	88,300	54.7	64.3	1,326	1,330	1,581	1,601	96.1	27,300	24,600
Ind., Ill., Ky.	98.9	292,700	288,400	67.8	66.8	4,416	4,181	5,519	5,577	95.5	76,700	78,700
Okla., Kans., Mo.	89.6	210,300	203,200	48.3	46.7	3,311	3,505	4,279	4,365	92.3	42,000	48,700
Texas	91.3	520,300	562,400	68.0	73.5	7,967	7,573	11,504	11,873	96.8	122,400	118,600
La., Ark.	98.9	168,600	174,900	73.1	75.9	1,347	1,262	4,343	4,070	100.0	31,000	32,000
Rocky Mountain	89.4	31,700	35,600	22.0	24.8	1,736	1,665	737	750	98.5	12,300	13,500
California	97.1	446,700	432,100	50.3	48.7	13,408	13,203	96,476	96,393	100.0	51,100	45,700
Total	95.2	2,207,700	2,238,000	60.2	61.1	37,989	37,199	132,477	132,541	95.6	459,100	454,100
Texas (Gulf Coast)	99.8	418,600	447,900	78.8	84.3	6,178	5,784	8,517	8,845	98.6	98,700	93,900
La. (Gulf Coast)	100.0	115,700	116,700	78.4	79.1	1,219	1,110	3,515	3,168	100.0	23,100	22,700

Compilation Of Mid-Continent Refinery Operations

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Mid-Continent Refinery Operations, Week Ended January 1 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	West Texas	North La.-Ark.	Total Week Ended Jan. 1
Plants Reporting	10	23	23	10	10	76
Da. Av. Cap. (Bbls.)	94,000	162,500	107,400	71,500	60,700	496,100
Da. Cracking Capacity	53,200	64,600	23,100	26,250	31,700	198,850
Da. Av. Crude Runs	56,734 + 0.2	63,117 — 7.2	42,121 — 22.4	11,291 — 13.8	37,883 — 11.3	211,146 — 10.2
Da. Av. Other Oil	10,247 + 44.7	8,305 +256.6	5,509 +137.0	.....	14,409 — 5.2	38,470 + 42.8
GASOLINE—Gallons						
Stocks, Dec. 25	34,771,000	43,309,000	34,676,000	14,317,000	5,945,000	133,018,000
Prod. 12-25 to 1-1	8,667,000 — 9.4	11,873,000 — 1.2	7,514,000 — 18.0	1,623,000 + 7.7	5,068,000 — 17.0	34,745,000 — 9.4
Ship. 12-25 to 1-1	9,183,000 + 7.6	15,916,000 + 58.2	6,089,000 — 14.0	2,105,000 + 44.5	6,649,000 + 19.7	39,942,000 +22.2
Stocks, Jan. 1	34,255,000 — 1.5	39,266,000 — 9.3	36,101,000 + 4.1	13,835,000 — 3.4	4,364,000 — 26.6	127,821,000 — 3.9
Ratio Sales to Prod.	106.0%	134.1%	81.0%	129.7%	131.2%	115.0%
KEROSINE—Gallons						
Stocks, Dec. 25	8,653,000	12,064,000	2,011,000	12,000	807,000	23,547,000
Prod. 12-25 to 1-1	2,533,000 + 33.9	1,153,000 — 37.1	581,000 — 30.8	....	533,000 + 15.1	4,800,000 — 4.8
Ship. 12-25 to 1-1	2,626,000 + 9.0	2,046,000 + 34.3	751,000 — 20.1	....	555,000 + 91.4	5,978,000 + 15.5
Stocks, Jan. 1	8,560,000 — 1.1	11,171,000 — 7.4	1,841,000 — 8.5	12,000	785,000 — 2.7	22,369,000 — 5.0
Ratio Sales to Prod.	103.7%	177.4%	129.3%	.....	104.1%	124.5%
STOVE DISTILLATE—Gallons						
Stocks, Dec. 25	1,801,000	10,976,000	125,000	22,000	53,000	12,977,000
Prod. 12-25 to 1-1	579,000 + 38.2	703,000 + 32.6	53,000	....	10,000 — 79.2	1,345,000 + 34.9
Ship. 12-25 to 1-1	776,000 + 54.6	944,000 — 23.3	84,000 — 37.8	10,000 — 37.5	24,000 — 25.0	1,838,000 — 4.0
Stocks, Jan. 1	1,604,000 — 10.9	10,735,000 — 2.2	94,000 — 24.8	12,000 — 45.5	39,000 — 26.4	12,484,000 — 3.8
Ratio Sales to Prod.	134.0%	134.3%	158.5%	.....	240.0%	136.7%
GAS OIL—Gallons						
Stocks, Dec. 25	9,621,000	33,388,000	4,800,000	1,264,000	5,684,000	54,757,000
Prod. 12-25 to 1-1	501,000 — 56.5	1,408,000 +310.5	720,000 ...	17,000	1,770,000 — 34.0	4,416,000 + 7.7
Ship. 12-25 to 1-1	1,177,000 — 8.1	5,161,000 +339.0	811,000 +251.1	16,000 — 89.4	2,090,000 — 21.6	7,255,000 + 43.7
Stocks, Jan. 1	8,945,000 — 7.0	31,635,000 — 5.3	4,709,000 — 1.9	1,265,000 + 00.7	5,364,000 — 5.6	51,918,000 — 5.2
Ratio Sales to Prod.	234.9%	224.5%	112.6%	94.1%	118.1%	164.3%
FUEL OIL—Gallons						
Stocks, Dec. 25	12,218,000	61,172,000	93,024,000	10,846,000	18,295,000	195,555,000
Prod. 12-25 to 1-1	5,432,000 + 8.8	2,880,000 + 2.8	4,580,000 — 18.4	489,000 — 53.3	4,420,000 + 11.1	17,801,000 — 3.4
Ship. 12-25 to 1-1	5,409,000 + 19.3	4,348,000 — 0.9	4,381,000 — 16.7	1,537,000 — 37.4	3,992,000 — 31.3	19,667,000 — 12.4
Stocks, Jan. 1	12,241,000 + 0.2	59,704,000 — 2.4	93,223,000 + 0.2	9,798,000 — 9.7	18,723,000 + 2.3	193,689,000 — 1.0
Ratio Sales to Prod.	99.6%	151.0%	95.7%	314.3%	90.3%	110.5%

Gasoline Produced by Various Methods, Week Ended January 1

	Kansas	% of Total	Oklahoma	% of Total	North & Cent. Texas	% of Total	West Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	4,616,000	53.3	6,875,000	57.9	3,832,000	51.0	1,135,000	69.9	2,461,000	48.6	18,919,000	54.5
Cracked	3,469,000	40.0	3,716,000	31.3	2,772,000	36.9	439,000	27.1	2,220,000	43.8	12,616,000	36.3
Natural	582,000	6.7	1,282,000	10.8	910,000	12.1	49,000	3.0	387,000	7.6	3,210,000	9.2
Total	8,667,000		11,873,000		7,514,000		1,623,000		5,068,000		34,745,000	

+ or — columns are % change over previous week.

Buying Rush Cuts Gasoline Stocks; Crude Runs Reduced

Staff Special—By Telegraph

TULSA, Jan. 5

RUNS of crude oil to stills at Mid-Continent refineries was the lowest of the year in the last week of 1931. The low mark was interpreted to indicate that Mid-Continent refiners are beginning sizeable reductions in crude oil runs.

The reduction the last week of 1931 was 24,100 barrels daily average, with all districts but Kansas joining in the curtailment.

Jobbers, their inventories taken for the year-end, were in the market. The pending increase in freight rates also stimulated buying as jobbers strove to stock up before higher tariffs become effective. The increase in shipments over the preceding week's shipments was 7,200,000 gallons or 22 per cent. Movement of gasoline was lighter than in the week before only from North Texas plants.

Gasoline stocks were lowered 5,200,000 gallons and on Dec. 31 were only 3,900,000 gallons larger than

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended Jan. 1. Change in stocks figured from Dec. 4.

GASOLINE

	Gallons
Production	157,598,000
Shipments	148,484,000
Net change in stocks	+9,114,000
Ratio sales to production	94.2%

KEROSINE

	Gallons
Production	19,821,000
Shipments	25,153,000
Net change in stocks	—5,332,000
Ratio sales to production	126.9%

STOVE DISTILLATE

	Gallons
Production	4,730,000
Shipments	8,033,000
Net change in stocks	—3,303,000
Ratio sales to production	169.8%

GAS OIL

	Gallons
Production	16,739,000
Shipments	23,491,000
Net change in stocks	—6,752,000
Ratio sales to production	140.3%

FUEL OIL

	Gallons
Production	76,943,000
Shipments	91,207,000
Net change in stocks	—14,264,000
Ratio sales to production	118.5%

stocks at the end of 1930 at the same plants.

Kerosine production was down. Shipments were larger and stocks were lowered 1,100,000 gallons.

Distillate production was increased 300,000 gallons. Shipments fell a little but stocks were reduced 400,000 gallons. Gas and fuel oil stocks also were reduced a little.

Price Mix-Up Follows Cent Drop In Tax

TULSA, Jan. 2.—The drop of 1 cent in the state gasoline tax in Oklahoma caused a mix-up in retail gasoline prices which for a time promised to develop into a price war.

Christmas Day Magnolia Petroleum Co. posted an increase of 1 cent a gallon in tank wagon and service station prices. Three or four other major operators met this increase, but others, among them Continental Oil Co. and Phillips Petroleum Co. did not advance prices. The schedule for service stations in Tulsa, for example, was 17 cents at a few stations, and 16 cents at others.

Continental Oil Co. later announced it would reduce the tank wagon and service station price 1 cent Dec. 31 when the tax dropped back to 4 cents. Others announced they also would make the 1 cent reduction. The schedules accordingly were 15 and 16 cents effective Dec. 31.

Jan. 1 Magnolia Petroleum Co. and the others who had advanced Christmas Day announced another reduction of 1 cent, and the service station price Jan. 2 was uniform in Tulsa at 15 cents for white gasoline. Blue gasoline was selling at 10 cents, tax included.

Tampico Refinery to Cease Importing Crude

CLEVELAND, Jan. 4. — Construction of a new unit at the Tampico, Mexico refinery of the Huasteca Petroleum Co., Standard Oil Co. of Indiana subsidiary, is reported to be a part of the program of expansion of that company beginning Jan. 1, when the company will resume production and refining activities. The unit will add 3500 barrels per day to the plant's crude capacity.

It is also reported that this company will operate its Mexican plants on Mexican crude, stopping imports from Venezuela. This action it is understood is in line with the expressed wishes of the Mexican government that refineries in that country operate on local crude instead of importing.

PARTICULARLY true of Freedom *Low Cold Test Oils* are such endorsements as "If there is a refinery that produces better oil than Freedom, we have been unable to find it" and "When it comes to quality, Freedom is right on top." These opinions express the satisfaction of the 700 and more jobbers who market Freedom 100% Pennsylvania Motor Oils under their own brand name or one of our brands and make the handsome margin of profit that goes with it.

Freedom *Low Cold Test Oils* fully meet the severe demands of winter driving. Made of the finest 100% Pennsylvania Crudes, refined and dewaxed by special Freedom processes which include pressing at temperatures below zero, they possess all of the extra lubricating characteristics for which Freedom has become famous and in addition provide appreciable easier starting in coldest weather.

We would like to supply you with Freedom *Low Cold Test Oils*, also other motor oils made (Sharples Process) to your specifications or tested specifications of this 52-year-old organization. Quick shipments in tank cars, compartment tank cars or carloads of barrels or drums. Your request for full information and quotations will receive immediate attention.

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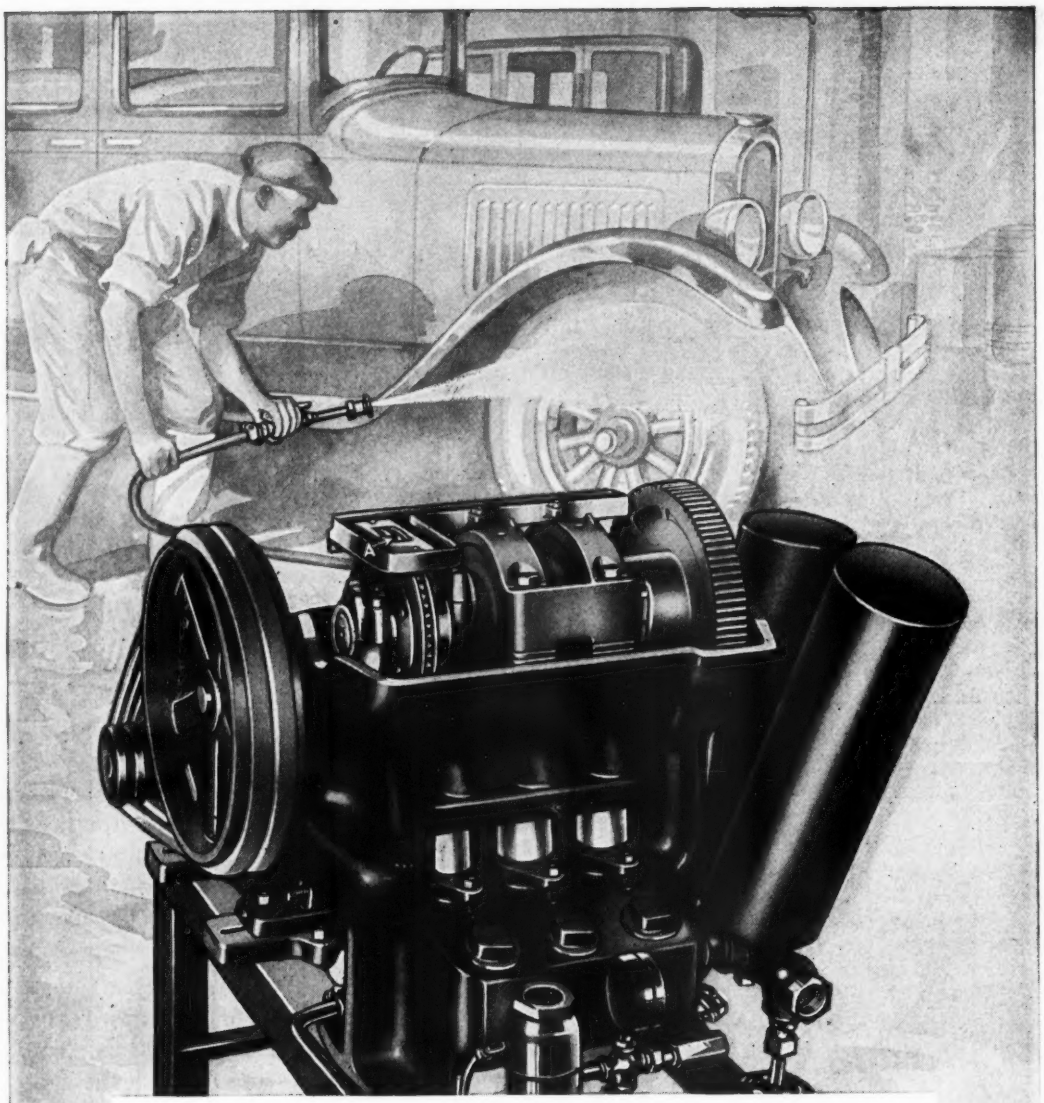

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CARE WILL SAVE YOUR CAR

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1. Silent V-belt drive—no noisy chains or gears to wear or break.
2. Outside packed pistons—packing adjustable without removing a part.
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4. Pump can't become air bound. Automatic pressure governor. No danger of water-hammer or blowing out plumbing.
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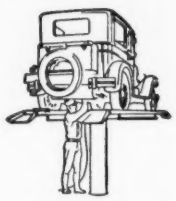

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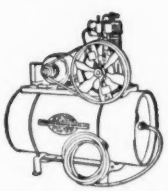
It both lifts and locks by oil, no air in cylinder. Oil lock unfailingly automatic.

Structural steel platform —9½ or 10½-inch diameter piston.

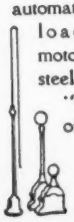
Packing gland at top of cylinder. No hidden leather cup to leak.

Free-wheel or roll-on types, also bus or truck size. Licensed under basic Lunati patents.



CURTIS COMPRESSOR

Has Timken tapered roller bearings. Automobile type "V" belt drive, automatic centrifugal unloader. Universal motor mounting. All steel base. Improved "Centro Ring" oiling.



CURTIS AIR STANDS—Reel and tower types.

Refinery - Tank Wagon Markets

Markets Show Unusual Year-End Activity; Prices Improve In Some Areas

CLEVELAND, Jan. 4

TRADING was more active in oil markets during the last week in 1931—more so than is usually the case at the year end. Improvement in prices was apparent in a number of refinery centers. The move to curtail crude oil production and refinery runs spread to areas outside of the Mid-Continent. Taking the situation as a whole, there was justification for the conservative optimism which was evidenced among traders in all parts of the country.

Various factors contributed to the increased activity. Buyers quite generally have allowed their stocks to get so low for the purpose of year-end inventories that in many instances orders for rush shipments to arrive after Jan. 1 were necessary to prevent shortages. In the Mid-Continent, the announcement that freight rates would be advanced 1 cent per 100 pounds Jan. 4 caused a substantial increase in activity there. The increase in freight amounts to more than $5 a car on light oils. Both large and small jobbers hurried to buy and refiners in the Chicago area made large purchases of natural gasoline. Most of them wanted their purchases to start rolling immediately.

Apparently liquidation of distress gasoline stocks in Texas has been completed. Refiners in that area reported booking a goodly volume of orders and late in the week prices were advanced to the levels prevailing in Oklahoma.

Supply continued to be considerably in excess of demand in the Pennsylvania field and prices receded slightly. Barge buyers were much more active in the eastern seaboard markets.

Kerosine continued to be in A-1 position in practically all markets. Pennsylvania prices advanced another 0.125 cent and prices in the Mid-Continent and along the eastern seaboard held the ground gained recently. The supply was not large in any part of the country.

Lubricating oil prices generally were steady. They showed resistance in Pennsylvania to the downward movement that has been under way for more than two months.

Cargo markets were quiet both at the Gulf and on the Pacific coast although in the latter area there was a fair demand for cased goods from South American and Oriental buyers. Prices of most oils were steady. Grade C bunker oil, in cargo lots, was offered at $0.38 per barrel at the Gulf as against a last paid price of $0.40.

Chicago Traders Look For Higher Prices

Staff Special

CHICAGO, Jan. 2

THE Chicago market passed another quiet week and price changes were few. However, despite the light buying, a more optimistic feeling was noted and the general opinion was that gasoline prices would move to higher levels shortly.

Jobbers generally were reported to be doing only a comparatively small amount of spot gasoline buying, although their instructions against contracts were said to be entirely satisfactory for the season.

Tank car marketers generally said they were not offered as much low-priced gasoline, for resale purposes, as was the case in the previous week. Whether this indicated that the refiners who needed relief had obtained it or whether they figured that the market was too inactive to make it worth while offering material at present was hard to tell. However, most traders said they believed prices would move upward shortly and that demand also would increase.

So far as actual sales were concerned, gasoline prices showed little change in the week ended Jan. 2 over those of the previous week. The majority of traders reported they were getting 2.5 cents and up for U. S. Motor, depending on the octane rating. Sales of gasoline with 65 octane rating generally were reported at 3 to 3.375 cents.

Summary of Group 3 Quotations for U. S. Motor Gasoline

In Effect Jan. 4, 1932

	Below 57 Octane No.	57-65 Octane No.	Above 65 Octane No.
Okla.	2.625-3.00	2.875-3.25	3.125-3.50
Kans.	2.75-3.00	3.00-3.25	3.25-3.50
N. Tex.	2.625-2.75	2.875-3.00	3.125-3.25
W. Tex.	2.625-2.75	2.875-3.00	3.125-3.25
La.-Ark.	3.00	3.25	3.50
Ind.-Ill.	2.625-2.75	.....	.....

Prices are those quoted on the basis of f.o.b. Group 3 by refiners in the districts designated.

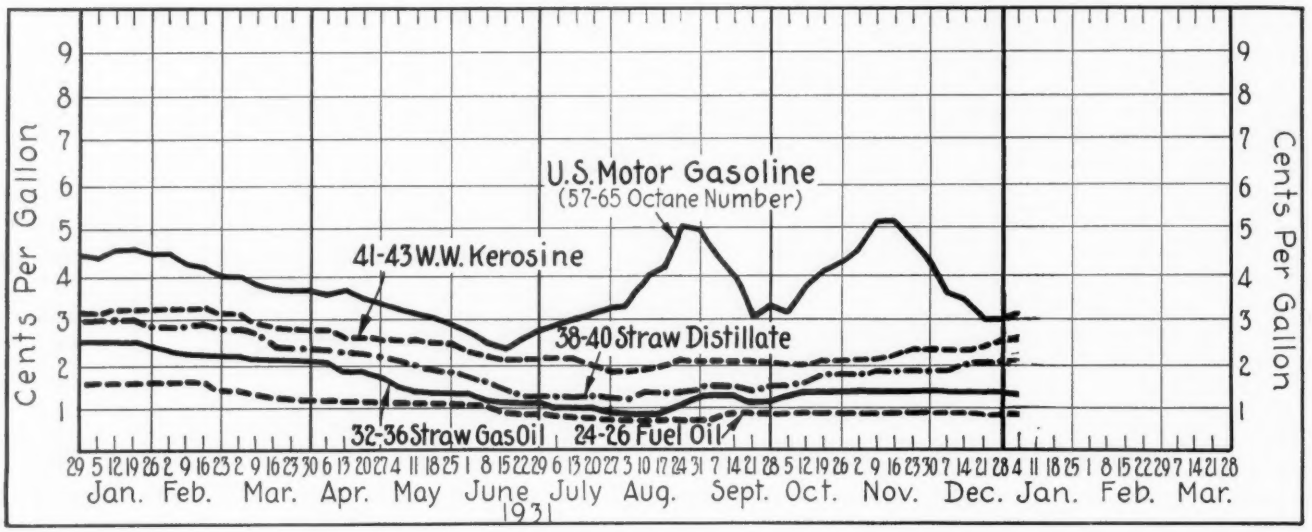
High gravity gasolines were steady. Demand was only moderate but traders said there appeared to be no surplus of good 64-66, 375 or 68-70, 350-360 e.p. gasoline available. One Group 3 refiner, generally active in the high test market, said he was practically sold up and not anxious to move material at present.

Kerosines continued to be the feature of the market from a price standpoint. Many traders asked 2.5 cents for 41-43 w.w. kerosine, an increase of 0.125 cent, although some still was reported available at 2.375 cents. The 42-44 w.w. grade moved at 2.5 to 2.625 cents. The general situation was unchanged so far as demand was concerned.

A number of tank wagon distributors of furnace oils reported a pick-up in their business during the holidays. This resulted in a slight increase in tank car demand, although the weather continued too mild to bring the usual mid-winter activity.

Generally speaking, prices for distil-

Current Prices of Principal Mid-Continent Refined Products


Cents Per Gallon
U.S. Motor Gasoline
(57-65 Octane Number)
41-43 W.W. Kerosine
38-40 Straw Distillate
32-36 Straw Gas Oil
24-26 Fuel Oil
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.
1931

Prices shown are in Group 3 basis and extended to date shown in Refinery Market Table Section of this issue

lates, gas and fuel oils showed but little change. In a few cases some "distress" goods appeared at below the general market level, but it was not enough to seriously affect the market.

Texas Law Controlling Trucks Held Valid

TULSA, Jan. 2.—A Texas law placing the control of trucks, their weight, height, size and speed under state jurisdiction has been upheld by a three-judge federal court at Houston.

This ruling automatically will dissolve a temporary injunction granted several months ago with reference to that section of the law regulating the size of freight in bundles, boxes, etc.

The law limits loads to 7000 pounds for a truck or combination of truck and trailer and none must have a gross weight exceeding 600 pounds to the inch of tire width. These limitations do not apply on loads moving from point of origin to the nearest point of common carrier loading or unloading, passing no other common carrier point and with a maximum load of 14,000 pounds except under special permit. The law does not apply in incorporated cities.

L. G. Phares, chief of highway patrol, has held that under the latter class the vehicle should be registered for the gross weight of vehicle and load but that in no case should the gross weight of a four-wheel vehicle exceed 22,000 pounds. It is unlawful to register a vehicle exceeding the latter gross weight. Oil company superintendents of motor transportation here have been anxiously awaiting a decision in the case. The ruling was expected to have some effect on the hauling of equipment to the East Texas fields. Earlier in the year a considerable amount of equipment was trucked by oil companies from the Oklahoma fields to East Texas but a check here indicated the trucking was not so extensive now since the railroads had worked out the problem of handling the traffic faster than was the case when the field first was opened.

T. C. Allen

new advertising director of Marathon Oil Co.

Prize Winning Ad Clinches Oil Company Post

TULSA—T. C. Allen, whose poster design for the Marathon Oil Co. entitled "Timed!" won a prize among the country's principal advertisers at the second annual exhibit of outdoor advertising art recently, became advertising director for that company Jan. 1.

Mr. Allen as vice president and account manager for Rogers-Gano Advertising Agency here, has been handling the Marathon account for the past two years.

The Marathon is refining and marketing subsidiary of The Ohio Oil Co., Findlay, O.

Prices A Year Ago

Jan. 5, 1931

	Oklahoma	Penna.
58-60 U. S. Motor Gasoline	4.00-4.875	6.25-6.50
Grade A Natural Gasoline	3.25	.....
Kerosine (Okla. 41-43; Pa. 47 w. w.)	3.00-3.25	5.625-6.00
Fuel Oil (Okla. 24-26; Pa. 36-40)	$0.60-$0.70	3.375-4.00
Crude (Okla. 35-35.9)	$0.92	$1.85
Chicago tank wagon (including 3c tax)		16.00c

Mid-Continent Refinery Markets

Markets Improve At End of Year

Staff Special

TULSA, Jan. 2

MID-CONTINENT markets at the beginning of the new year were in a more favorable position than at any time in the past several weeks.

Refiners late in the last week of the year began receiving increased inquiries for gasoline. In some quarters this was taken as an indication jobbers who had kept stocks low for inventory purposes had re-entered the market in order to receive their gasoline after the first of the year. Just how much of the buying can be attributed to that situation cannot be determined, but there was no doubt a desire on the part of buyers to get their requirements rolling just as soon after the turn of the year as possible.

Another factor which developed suddenly was the announcement that freight rates would be advanced 1 cent per 100 pounds Jan. 4.

This advance was granted by the I. C. C. and the master emergency tariff published Dec. 26. It took two or three days for the effect of the advance to reach jobbers generally, but when it was realized the advance meant slightly more than $5 a car on gasoline, inquiries began increasing, and instructions were for rush shipment.

This buying quickly made inroads in the distress gasoline offered and by the end of the year there was virtually no gasoline being forced on the market regardless of price. The result was a fairly active post-Christmas market, contrary to the usual lull which sets in just before Christmas and holds until after Jan. 1.

Some of the buying went to Texas plants. With only a few operating in north, east and west Texas, the orders tended to stiffen prices somewhat, and quotations for new business moved up in line with those from Group 3.

No changes were noted in gasoline prices in other districts, with the exception of the higher gravities in Oklahoma, which advanced slightly on the low side of the range.

Natural gasoline manufacturers encountered comparatively brisk demand. Some of this buying, particularly by the Standard Oil Co. of Indiana, undoubtedly was done in order to get the material moved before the higher freight rates became effective.

A majority of manufacturers, however, adopted a watchful waiting policy and the price ranges established prior to Christmas held through the turn of the year.

Reports Dec. 31 indicated some new buying for a cargo of natural gasoline for coastwise movement was impending, but details were not obtainable. Several part cargoes already have been sold for late January lifting, according to reports here, but it was not known definitely how many of these cargoes already were in storage at the Gulf, and how much additional material would be needed to fill them.

Kerosines were not as actively in demand as they had been earlier in December, but the material was comparatively scarce and closely held with the result little was available for prompt shipment. Prices were firmly entrenched at new levels established earlier in the month, and in some instances these oils were giving the refiner a larger netback than was his ordinary grade of U. S. Motor gasoline.

Distillates also were scarce for prompt shipment, and refiners having sizable contracts said their shipments had increased considerably late in the month. A few refiners said they were completely sold up for the next two weeks.

Gas oils were steady in demand and price, with the zero grades scare in most districts.

Fuel oils marked time. Demand continued to run about even with production but the large buying orders which have been customary in years past were lacking this season.

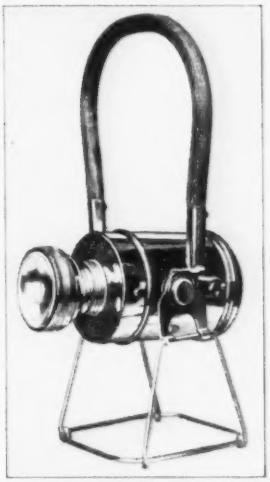
A majority of refiners making Mid-Continent bright stocks continued to ask 18 cents for their 150-160 vis. 210 D bright stock, of 0 to 10 cold test, and slightly lower prices for the higher cold-test stocks.

Several reported considerable competition from brokers who had made contracts earlier in the year at attractive prices. One large handler of bright stock had a contract with a Mid-Continent refiner for a 0 to 10 cold test oil, the price to be 1 cent under the price shown in price reporting mediums, but with a maximum price of 15 cents.

This broker has been able to quote prices considerably under those asked by a majority of refiners for spot business.

Neutral oils prices showed little change although demand was light most refiners reported, and competition from other districts was becoming stiffer.

Wax and coke prices were steady.



BRONSON ELECTRIC LANTERN

Fool proof and of sturdy construction, these electric lanterns have proven their worth for use at refineries and bulk stations.

Adjustable—to give safe illumination when and where you need it.

Write for prices

E. B. Bronson & Co.

Machinists — Contractors

Blue Island, Illinois

New Box Type Case

Completely equipped with bottles and jars . . . $15.75

269—A real oil sales case, covered with smooth black cowhide. Lined with red velvet. Case contains fourteen 4-ounce bottles and ten ½-ounce squat grease jars held in position by adjustable bars. Bottles are partitioned separately.

Less 10% for Cash

Other styles in our FREE Catalog

L-U-C-E

Builders of Sales Luggage

614 Delaware, Kansas City, Mo.

Chicago Tank Car Market

CHICAGO, Jan. 2

FEW changes were noted in the Chicago gasoline market last week. Traders generally continued to get 2.5 cents and up for U. S. Motor, depending on the octane rating. High gravity gasolines were steady. Kerosines were only fairly active but good material was not freely offered and sellers advanced their quotations 0.125 cent. Demand was reported slightly better for furnace oils, both from distributors and home burner owners, but little change was noted in prices.

Following prices represent majority of sales to jobbers on Group 3 freight basis, although shipments may originate in other refining districts such as North, West and East Texas, Louisiana, Arkansas, Indiana, Illinois, Kentucky, etc.

	Prices Jan. 4	Prices Dec. 28	Prices Dec. 21
50-52, 437 e.p. naphtha	2.50	2.50	2.50 – 2.625
U. S. Motor Gasoline:			
Below 57 octane number	2.50 – 2.75	2.50 – 2.75	2.625– 2.875
57-65 octane number	2.75 – 3.125	2.75 – 3.125	2.875– 3.125
Above 65 octane number	3.00 – 3.375	3.00 – 3.375	3.25 – 3.50
60-62, 437 e.p. gasoline:			
Below 57 octane number	2.625– 2.875	.....	.....
57-65 octane number	2.875– 3.125	.....	.....
Above 65 octane number	3.00 – 3.375	.....	.....
60-62 400 e.p. gasoline:			
Below 57 octane number	2.75 – 3.00	.....	.....
57-65 octane number	3.00 – 3.25	.....	.....
Above 65 octane number	3.125– 3.50	.....	.....
64-66 375 e.p. gasoline	3.50 – 3.75	3.50 – 3.75	3.50 – 3.75
68-70 350-360 e.p. gasoline	3.875– 4.00	3.875– 4.00	3.875– 4.125
*Domestic Aviation Gasoline	4.25 – 4.75	4.25 – 4.75	4.50 – 4.75
41-43 w.w. kerosine	2.375– 2.50	2.375	2.25 – 2.375
42-44 w.w. kerosine	2.50 – 2.625	2.50	2.375– 2.50
38-40 p. w. distillate	1.875– 2.00	1.875– 2.00	1.875– 2.00
38-40 straw distillate	1.875– 2.00	1.875– 2.00	1.875– 2.00
32-36 ordinary dark gas oil	1.25 – 1.375	1.25 – 1.375	1.25 – 1.375
32-36 dark zero gas oil	1.625– 1.75	1.625– 1.75	1.625– 1.75
32-36 straw zero gas oil	1.75	1.75	1.75
28-30 zero fuel oil (per bbl.)	$0.50 –$0.55	$0.50 –$0.55	$0.50 –$0.55
28-30 fuel oil (per bbl.)	$0.40 –$0.425	$0.40 –$0.425	$0.40 –$0.425
24-26 fuel oil (per bbl.)	$0.30 –$0.325	$0.30 –$0.325	$0.30 –$0.325
18-22 fuel oil (per bbl.)	$0.225–$0.25	$0.225–$0.25	$0.225–$0.25
18-22 zero fuel oil (per bbl.)	$0.25 –$0.30	$0.25 –$0.30	$0.25 –$0.30
14-16 fuel oil (per bbl.)	$0.175–$0.225	$0.175–$0.225	$0.175–$0.225

*Prices are based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167° F., and not less than 122° F.; 50% recovery at 221°; 90% at 311°; 96% at 347°; end point 374° F. Gasoline of fighting grade specifications in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

Selling Batteries

(*Continued from page* 40)

list, and show the customer the printed price for his battery. This pulling a price out of thin air looks suspicious. The customer has reasons to wonder if he might bargain for a better price. Even if you know the price list backwards look it up on the list under the glass top of the desk, or on a price list on the wall, or on a folder, and show the customer the printed price.

The customer also has a better impression of the salesman's ability if the manufacturer's or seller's chart is consulted for the proper size battery for the automobile. After all you are not selling a handful of plates and separators hidden in a rubber case. You are selling a power plant and it should be strong enough to meet all demands of electrical appliances and climate. You are selling a professional service, not just a piece of merchandise.

A proper analysis of the customer's needs will take your battery business out of the rut of just another battery seller, and will enable you to talk quality and service rather than mere price.

Cut prices have been just as troublesome in selling batteries, as in selling gasoline or tires. With business conditions as they are, there naturally will be a demand for a low price battery, just as there are some car owners who buy low priced gasoline and motor oil. Garages, accessory stores, mail order houses, and even department stores have been making a play for this buyer's business.

The oil marketer should not forget, that in spite of the owner's inclination to buy on price, his car needs a battery of a given amperage-hour capacity, with plates of the proper number and thickness; also that he is going to hear more from that customer than the accessory store that may sell a low price battery of questionable service abilities.

A one-stop station operator, with over ten years' experience, has learned to sit tight on price buying. Results with a customer recently show the value of merchandising over price selling.

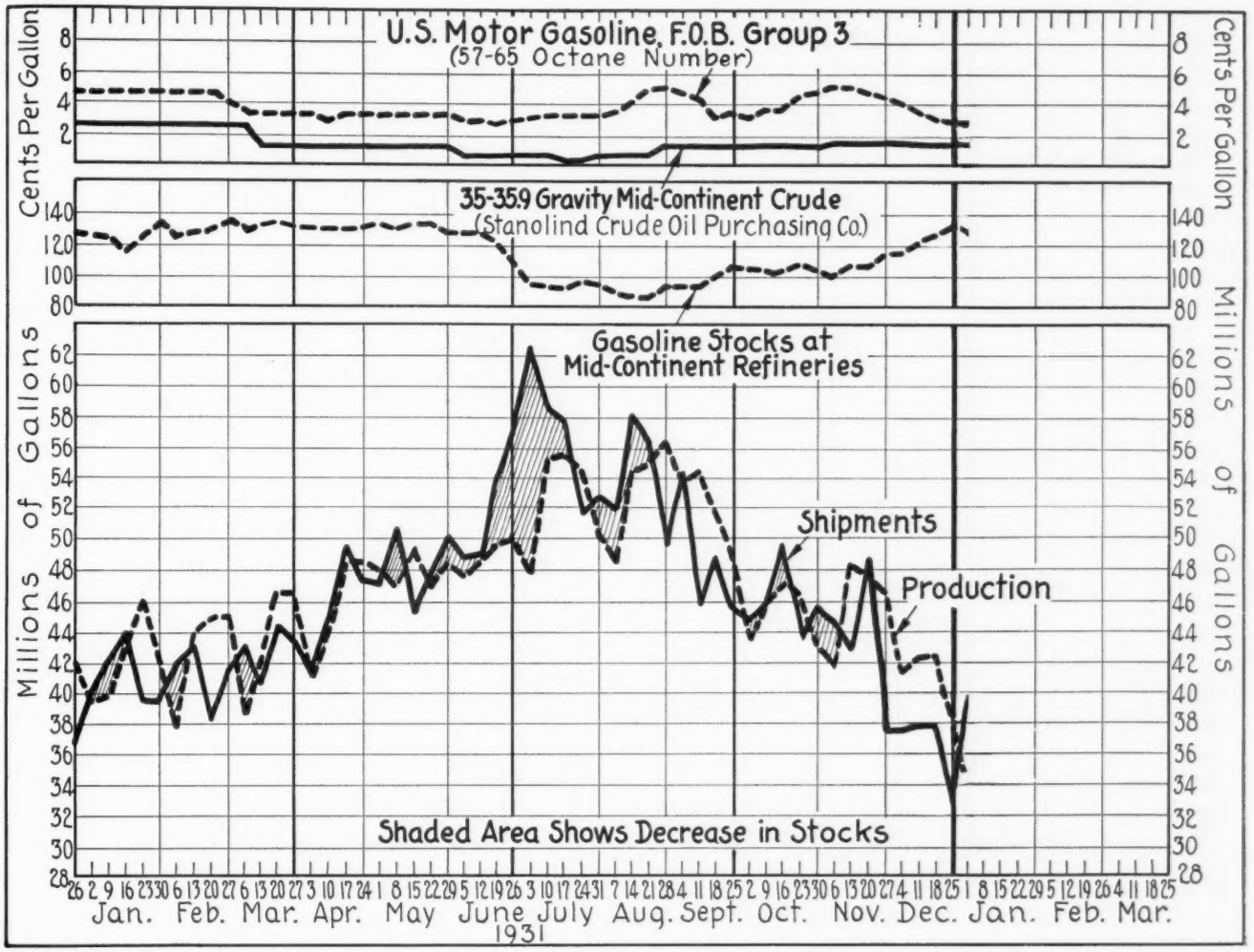
This customer wanted an inexpensive battery, and this station operator kept recommending a higher priced battery of bigger capacity. The customer finally purchased, at another battery sales outlet, at a price.

About a month later the customer returned to the one-stop station, and returned to buy. He lived about ten miles out in the country, and drove to work each day. Several neighbors also used his car for transportation. The price battery worked fine, until one cold morning, it failed to do its job. That man, as well as his neighbors, missed one day's work. He had learned the lesson of paying a fair price for adequate merchandise.

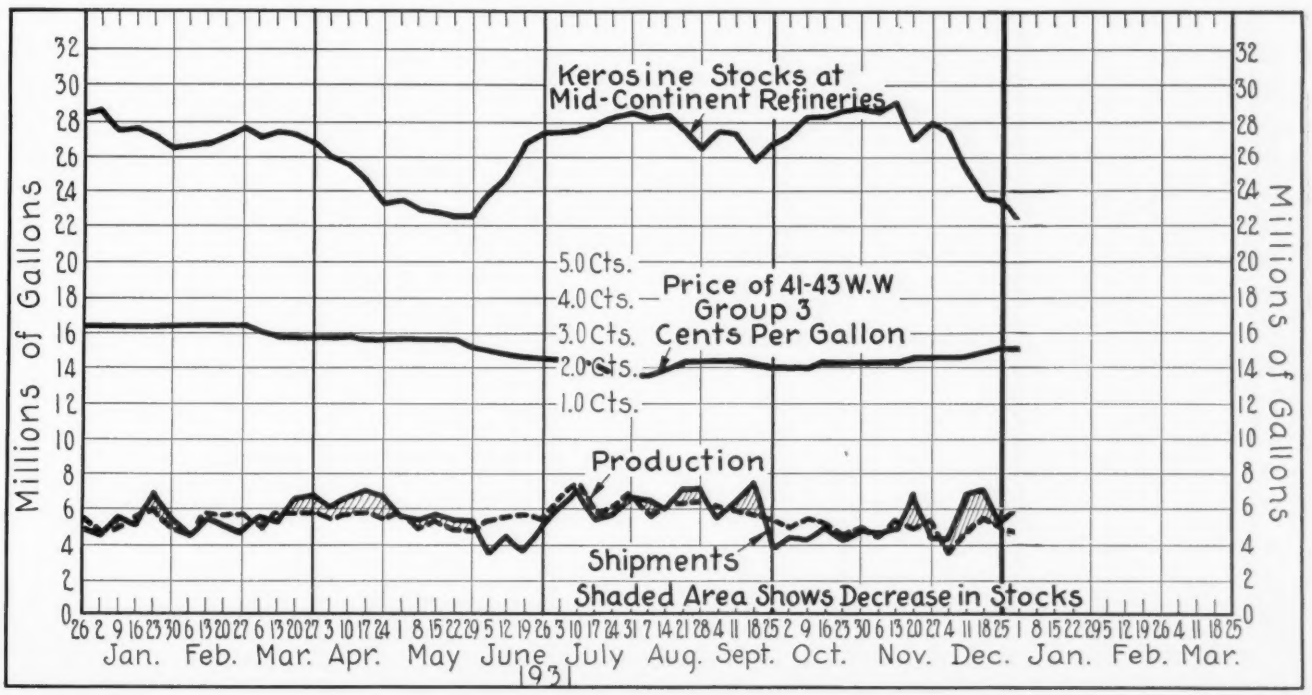
In talking with one-stop station operators who have merchandised batteries there has been nothing to discourage the service station from selling batteries profitably, providing the marketer has trained personnel in the battery department, an aggressive sales plan of inspection, tells the public that batteries are sold at his service station and provided he has the ability to sell quality merchandise at a fair price.

Barometer of Mid-Continent Refinery Market—Week Ending January 1

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News


U.S. Motor Gasoline, F.O.B. Group 3
(57-65 Octane Number)
Cents Per Gallon
35-35.9 Gravity Mid-Continent Crude
(Stanolind Crude Oil Purchasing Co.)
Gasoline Stocks at
Mid-Continent Refineries
Shipments
Production
Shaded Area Shows Decrease in Stocks
Millions of Gallons
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.
1931

Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date as shown in the table on page 50



Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted.

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

OKLAHOMA (F. o. b. Oklahoma refineries)

	Prices Jan. 4	Prices Dec. 28	Prices Dec. 21
50-52 450 e.p. naphtha...	2.50 – 2.625	†2.50 – 2.625	†2.50 – 2.625
U. S. Motor Gasoline			
Below 57 octane number	2.625– 3.00	2.625– 3.00	2.625– 3.00
57-65 Octane number....	2.875– 3.25	2.875– 3.25	2.875– 3.25
Above 65 Octane number	3.125– 3.50	3.125– 3.50	3.125– 3.50
60-62, 400 E.P. Gasoline			
Below 57 Octane number	2.875– 3.125	3.00 – 3.25	3.00 – 3.25
57-65 Octane number....	3.125– 3.375	3.25 – 3.50	3.25 – 3.50
Above 65 Octane number.	3.375– 3.625	3.50 – 3.75	3.50 – 3.75
64-66, 375 E.P. Gasoline			
Below 57 Octane number	3.50 – 3.625	3.375– 3.625	3.375– 3.625
57-65 Octane number....	3.625– 3.875	3.625– 3.875	3.625– 3.875
Above 65 Octane number	4.00 – 4.125	3.875– 4.125	3.875– 4.125
68-70 350-360 e.p. gasoline	†4.125– 4.375	†4.00 – 4.25	†4.125– 4.25
‡Domestic Aviation Gasoline.....	4.25 – 4.50	4.50 – 4.75	4.50 – 4.75

‡Prices based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167° F., and not less than 122° F., 50% rec. at 221°; 90% at 311°; 96% at 347°; end point, 374° F. Fighting grade in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

52-54 Naphtha.....	4.00 – 4.125	4.00 – 4.25	4.00 – 4.25
54-56 Naphtha.....	4.00 – 4.25	4.125– 4.25	4.125– 4.25
58-60 U.S. Motor 437 e.p.	4.125– 4.50	4.25 – 4.50	4.25 – 4.50
60-62 400-410 e.p. gasoline	4.25 – 4.625	4.25 – 4.625	4.375– 4.625
64-66 390 e.p. gasoline...	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
68-70 350-360 e.p.....	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75

OHIO (Quotations of S. O. Ohio. 4c state tax to be added. Delivered any point in Ohio.)

U. S. Motor Gasoline....	7.75	7.75	7.75
60-65 Octane number....	8.00	8.00	8.00

KANSAS (F. o. b. refinery, Kansas destination)

U. S. Motor Gasoline			
Below 57 Octane number	3.00 – 3.375	3.00 – 3.375	3.00 – 3.375
57-65 Octane number....	3.25 – 3.625	3.25 – 3.625	3.25 – 3.625
Above 65 Octane number	3.50 – 3.875	3.50 – 3.875	3.50 – 3.875
60-62 400 e.p. gasoline....	3.50 – 3.875	3.50 – 3.875	3.50 – 3.875
64-66 375 e.p. gasoline....	4.125– 4.375	4.125– 4.375	4.125– 4.375

NORTH TEXAS (F. o. b. North Texas refineries)

56-58 450 e.p. gasoline...	Discontinued	†2.50	†2.50 – 2.625
58-60 450 e.p. gasoline...	†2.50	†2.50	†2.50 – 2.625
U. S. Motor Gasoline			
Below 57 Octane number	2.625– 2.75	2.50 – 2.75	2.50 – 2.75
57-65 Octane number....	2.875– 3.00	2.75 – 3.00	2.75 – 3.00
Above 65 Octane number	3.125– 3.25	3.00 – 3.25	3.00 – 3.25
60-62 400 e.p. gasoline...	2.875– 3.00	2.75 – 3.00	2.75 – 3.00
64-66 390 e.p. gasoline...	3.25 – 3.375	3.125– 3.375	3.125– 3.375
64-66 375 e.p. gasoline...	3.375– 3.50	3.25 – 3.50	3.25 – 3.50
68-70 350-360 e.p. gasoline	†4.125– 4.25	†4.00 – 4.125	†4.00 – 4.125

****WEST TEXAS** (F. o. b. West Texas refinery, for unrestricted shipment)

U. S. Motor Gasoline			
Below 57 Octane number	2.625– 2.75	2.50 – 2.75	2.50 – 2.75
57-65 Octane number....	2.875– 3.00	2.75 – 3.00	2.75 – 3.00
Above 65 Octane number	3.125– 3.25	3.00 – 3.25	3.00 – 3.25

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

U. S. Motor Gasoline			
Below 57 Octane number	3.25	3.25	3.50
57-65 Octane number....	3.50	3.50	3.75
Above 65 Octane number	3.75	3.75	4.00

ARKANSAS (Ark., N. La., and Miss. destination)

U. S. Motor Gasoline			
Below 57 Octane number	3.25	3.25	3.50
57-65 Octane number....	3.50	3.50	3.75
Above 65 Octane number	3.75	3.75	4.00

CALIFORNIA (3c tax to be added to California gasoline prices if used in state.)

54-58 U.S. Motor 437 e.p.	6.00 – 8.50	6.00 – 8.50	6.50 – 8.50
54-58 U.S. Motor, for outside state shipment....	6.00 – 7.25	6.50 – 7.50	6.50 – 7.50
58-61 375-400 e.p. gasoline	9.50 –10.50	9.50 –10.50	9.50 –10.50
42-45 Engine Distillate 445-480 e.p.....	6.50 – 6.75	6.50 – 7.50	7.00 – 8.00

†Prices Nominal. ††Only one refiner quoting. *Quotations only.

NATURAL GASOLINE

End point of all grades, not over 375F.

OKLAHOMA (F. o. b. Group 3)

	Prices Jan. 4	Prices Dec. 28	Prices Dec. 21
Grade AA, 80-87.9, 90% Recovery.....	Discontinued	2.00 – 2.125	2.00 – 2.125
Grade A, 72-79.9, 90% Recovery.....	"	†2.625	†2.625
Grade BB, 84-92, 85% Recovery.....	"	†1.75 – 1.875	†1.875– 2.00
Grade B, 76-83.9, 85% Recovery.....	"	†1.75 – 1.875	†1.875– 2.00
Grade C, 80-92, 78% Recovery.....	"	†1.75 – 1.875	†1.875– 2.00
‡Grade 26-70.....	2.00 – 2.125	2.00 – 2.125	2.00 – 2.125

NORTH TEXAS (F. o. b. Breckenridge)

Grade AA, 80-87.9, 90% Recovery.....	Discontinued	1.75 – 1.875	1.875– 2.00
Grade A, 72-79.9, 90% Recovery.....	"	†2.375– 2.50	†2.375– 2.50
Grade BB, 84-92, 85% Recovery.....	"	†1.625– 1.75	†1.75 – 1.875
Grade B, 76-83.9, 85% Recovery.....	"	†1.625– 1.75	†1.75 – 1.875
Grade C, 80-92, 78% Recovery.....	"	†1.625– 1.75	†1.75 – 1.875
‡Grade 26-70.....	1.75 – 1.875	1.75 – 1.875	1.875– 2.00

NORTH LOUISIANA (F. o. b. Monroe District)

Grade AA.....	Discontinued	†2.00 – 2.125	†2.00 – 2.125
Grade BB.....	"	†1.75 – 1.875	†1.875– 2.00
Grade C.....	"	†1.75 – 1.875	†1.875– 2.00
‡Grade 26-70.....	2.00 – 2.125	.....	.....

CALIFORNIA (F. o. b. California refineries)

75-85, 375-390 e.p. for blending.....	5.50 – 6.25	5.50 – 6.25	5.75 – 6.50

‡Majority of manufacturers quote prices on inquiries for other grades based on a differential above or below Grade 26-70, depending on the stability of the grade desired as related to that of Grade 26-70.

BURNING OILS

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

45 w.w. kerosine.....	4.25 – 4.50	4.25 – 4.375	4.125– 4.25
46 w.w. kerosine.....	4.375– 4.625	4.375– 4.625	4.25 – 4.375
47 w.w. kerosine.....	4.50 – 4.75	4.50 – 4.75	4.375– 4.50

OKLAHOMA (F. o. b. Oklahoma refineries)

41-43 w.w. kerosine.....	2.50	2.50	2.375– 2.50
42-44 w.w. kerosine.....	2.625	2.625	2.50 – 2.625

KANSAS (F. o. b. refinery Kansas destination)

41-43 w.w. kerosine.....	2.50 – 2.75	2.50 – 2.75	2.50 – 2.75
42-44 w.w. kerosine.....	2.625– 2.875	2.625– 2.875	2.625– 2.875

NORTH TEXAS (F. o. b. North Texas refineries)

40-42 w.w. kerosine.....	Discontinued	†2.375	†2.375
41-43 w.w. kerosine.....	†2.50	†2.50	†2.50

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

41-43 w.w. kerosine.....	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25

ARKANSAS (Ark., N. La. and Miss. destination)

41-43 w.w. kerosine.....	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25

CALIFORNIA (F. o. b. California refineries)

38-40 w.w. kerosine.....	3.75 – 4.75	4.00 – 5.00	4.00 – 5.00

NEUTRAL OIL

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

Vis.	(Viscosity at 70° F.)		
200 No. 3 color, 420-425 flash.....	18.50 –19.00	18.50 –19.00	18.50 –19.00
180 No. 3 color, 410-415 flash.....	16.50 –17.00	16.50 –17.00	16.50 –17.00
150 No. 3 color, 400-405 flash.....	14.00 –15.00	14.00 –15.00	14.00 –15.00

Note: Refiners quote 3 to 4c higher for 0 to 10 pour test oils; 1 to 2c higher for 10 to 15 pour test oils than prices shown above on this date.

****Prices represent quotations and sales**

Refinery Markets Wax, Lubricants, Heavy Oil

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted.

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

****MID-CONTINENT** (F. o. b. Mid-Continent refineries)

Vis.	Color	Prices Jan. 4 (Viscosity at 100° F.) 0 to 10 Pour Point	Prices Jan. 4 (Viscosity at 100° F.) 15 to 30 Pour Point	Prices Dec. 28 (Viscosity at 100° F.) 0 to 10 Pour Point	Prices Dec. 28 (Viscosity at 100° F.) 15 to 30 Pour Point
100	No. 2	4.50	4.00 – 4.25	4.75	4.00
150	No. 3	6.50	6.25	6.75	6.50
150	No. 4	6.00 – 6.25	5.75 – 6.00	6.25 – 6.50	6.00
180	No. 3	8.00	7.75	8.25	8.00
180	No. 4	7.50	7.25	7.75	7.50
180	No. 5	6.75	6.50	7.00	6.75
200	No. 3	8.50 – 9.00	8.50	9.50	9.00
200	No. 4	8.25	8.00	9.00 – 9.25	8.50
200	No. 5	8.00	7.75 – 8.00	9.00	8.25
220	No. 3	9.25 – 9.50	9.00	9.75	9.50
220	No. 4	9.00 – 9.25	8.50 – 8.75	9.50	9.00
220	No. 5	8.75 – 9.00	8.50	9.25	8.75
240	No. 3	10.00 –10.25	9.50 – 9.75	11.00	10.50
240	No. 4	9.75	9.25	10.25	9.75
240	No. 5	9.50	9.00	9.875–10.00	9.50
280	No. 3	11.25 –11.50	10.75 –11.00	12.50	12.00
280	No. 4	11.00	10.50	11.50 –11.75	11.00 –11.25
280	No. 5	10.75	10.25	11.25	10.75 –11.00

GULF COASTAL (F. o. b. Gulf Coastal refineries)

Vis.	Color	Prices Jan. 4 (Viscosity at 100° F., pour test 0)	Prices Dec. 28 (Viscosity at 100° F., pour test 0)	Prices Dec. 21 (Viscosity at 100° F., pour test 0)
100	No. 2 Pale	5.25 – 5.50	5.25 – 5.50	5.25 – 5.50
200	No. 3 Pale	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
300	No. 3 Pale	8.25 – 8.50	8.25 – 8.50	8.25 – 8.50
500	No. 3½ Pale	9.25 – 9.50	9.25 – 9.50	9.25 – 9.50
750	No. 4 Pale	10.25 –10.50	10.25 –10.50	10.25 –10.50
1200	No. 4 Pale	12.25 –12.50	12.25 –12.50	12.25 –12.50
2000	No. 4-5 Pale	13.25 –13.50	13.25 –13.50	13.25 –13.50
200	No. 5½ Red Oil	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
300	No. 5½ Red Oil	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
500	No. 6 Red Oil	8.25 – 8.50	8.25 – 8.50	8.25 – 8.50
750	No. 6 Red Oil	9.25 – 9.50	9.25 – 9.50	9.25 – 9.50
1200	No. 5-6 Red Oil	11.25 –11.50	11.25 –11.50	11.25 –11.50
2000	No. 5 Plus Red,Oil	13.25 –13.50	13.25 –13.50	13.25 –13.50

CALIFORNIA (F. o. b. California refineries)

Vis.	Color	(Viscosity at 100° F.)		
100	No. 3	8.00	8.00	8.00
200	No. 3	10.00	10.00	10.00
300	No. 3	10.50	10.50	10.50
450	No. 3	12.00	12.00	12.00
550	No. 3	13.50	13.50	13.50
600	No. 3	13.50	13.50	13.50
200	No. 5	10.00	10.00	10.00
300	No. 5	10.50	10.50	10.50
400	No. 5	12.00	12.00	12.00
500	No. 5	13.00	13.00	13.00
600	No. 5	13.50	13.50	13.50
700	No. 7	13.50	13.50	13.50

CYLINDER STOCKS

MID-CONTINENT (F. o. b. Mid-Continent refineries)
(Prices represent quotations and sales).

190-200 Vis. D at 210° Brt. St.	20.00	20.00	20.00
150-160 Vis. D at 210° Brt. St.:			
0-10 cold test	18.00	18.00 –19.00	18.00 –19.00
10-25 cold test	17.50	17.50 –18.00	17.50 –18.00
25-40 cold test	16.50	16.50 –17.00	16.50 –17.00
150-160 Vis. E 210° Brt. St.	16.00 –17.00	17.00	17.00
600 St. Ref. Olive Green	5.25 – 6.00	5.25 – 6.00	5.25 – 6.00
600 St. Ref. Dark Green	4.00 – 5.00	4.00 – 5.00	4.00 – 5.00
Black Oil	3.25 – 4.00	3.25 – 4.00	3.25 – 4.00

PENNSYLVANIA (F. o. b. Western Penna. refineries) **(A.S.T.M. Tests)**

600 Steam Refined, filterable	10.75 –11.00	10.75 –11.50	10.75 –11.50
650 Steam Refined	14.00 –14.50	14.50 –15.50	15.00 –15.50
600 Flash	15.00 –16.00	15.50 –16.50	16.00 –17.00
630 Flash	20.00 –21.00	20.50 –22.00	20.50 –22.00
600 Warren E	15.00 –15.50	15.00 –15.50	15.00 –15.50
Cold Test Stocks, 140-150 vis. at 210°, 540-550 flash, No. 8 color:			
20 pour test and below	19.00 –20.00	19.00 –20.00	19.00 –20.00
25 and 35 pour test	18.00 –19.00	18.00 –19.00	18.00 –19.00
40 pour test and above	†18.00 –18.50	†18.00 –19.00	†18.00 –19.00

WAX

PENNSYLVANIA (Per pound, F. o. b. New York)

122-124 white crude scale a.m.p.	2.125– 2.25	2.125– 2.25	2.125– 2.25
124-126 white crude scale, a.m.p.	2.125– 2.25	2.125– 2.25	2.125– 2.25

†Prices nominal ††Only one refiner quoting *Quotations only

****OKLAHOMA** (Per pound in barrels; in a few instances, per pound in burlap bags; F. o. b. Oklahoma refineries.)

	Prices Jan. 4	Prices Dec. 28	Prices Dec. 21
124-126 White Crude Scale, a.m.p.	1.75 – 1.875	1.75 – 1.875	1.75 – 1.875

DISTILLATE, GAS AND FUEL OIL

PENNSYLVANIA (For outside Pittsburgh district)

36-40 fuel oil	2.25 – 2.75	2.25 – 2.625	2.375– 2.625

OKLAHOMA (F. o. b. Oklahoma refineries)

38-40 straw distillate	2.00 – 2.125	2.00 – 2.125	2.00 – 2.125
36-38 straw distillate	†1.875– 2.00	†1.875– 2.00	†1.875– 2.00
32-36 straw gas oil	1.25 – 1.375	1.25 – 1.50	1.25 – 1.50
32-36 straw gas oil zero	†1.75 – 1.875	†1.75 – 1.875	†1.75 – 1.875
32-36 dark gas oil	1.25	1.25 – 1.375	1.25 – 1.375
32-36 dark gas oil zero	†1.75 – 1.875	†1.75 – 1.875	†1.75 – 1.875
28-30 zero fuel oil(per bbl.)	$0.525–$0.55	$0.525–$0.55	$0.525–$0.55
28-30 fuel oil (per bbl.)	$0.425–$0.45	$0.425–$0.45	$0.425–$0.45
26-28 fuel oil (per bbl.)	$0.375–$0.40	$0.375–$0.40	$0.375–$0.40
24-26 fuel oil (per bbl.)	$0.325–$0.35	$0.325–$0.35	$0.325–$0.35
22-26 fuel oil (per bbl.)	$0.30 –$0.325	$0.30 –$0.325	$0.30 –$0.325
18-22 fuel oil (per bbl.)	$0.275–$0.325	$0.275–$0.325	$0.275–$0.325
16-20 fuel oil (per bbl.)	$0.25 –$0.30	$0.25 –$0.30	$0.25 –$0.30
14-16 fuel oil (per bbl.)	$0.225–$0.25	$0.225–$0.25	$0.225–$0.25

KANSAS (F. o. b. refinery Kansas destination)

38-40 straw distillate	2.125– 2.25	2.125– 2.25	2.125– 2.25
36-38 straw distillate	2.00 – 2.125	2.00 – 2.125	2.00 – 2.125
32-36 straw gas oil	1.875– 2.00	1.875– 2.00	1.875– 2.00
18-22 fuel oil (per bbl.)	$0.375–$0.475	$0.375–$0.475	$0.375–$0.475
10-14 fuel oil (per bbl.)	$0.35 –$0.425	$0.35 –$0.425	$0.35 –$0.425

NORTH TEXAS (F. o. b. North Texas refineries)

38-40 straw distillate	†2.00	†2.00	†2.00
38-40 p.w.treated distillate	2.125– 2.25	2.00 – 2.125	2.00 – 2.125
32-36 gas oil, cracked	1.625– 1.75	1.625– 1.75	1.625– 1.75
32-36 St. reduced gas oil	1.375– 1.50	1.375– 1.50	1.375– 1.50
24-26 fuel oil (per bbl.)	$0.375–$0.425	$0.375–$0.425	$0.375–$0.425
20-24 fuel oil (per bbl.)	$0.325–$0.35	$0.325–$0.35	$0.325–$0.35
18-22 fuel oil (per bbl.)	$0.30 –$0.325	$0.30 –$0.325	$0.30 –$0.325

****WEST TEXAS** (F. o. b. West Texas refinery, for unrestricted shipment)

30-32 gas oil	†1.375– 1.50	†1.375– 1.50	†1.375– 1.50
28-30 zero gas oil	†1.375– 1.50	†1.375– 1.50	†1.375– 1.50
18-22 fuel oil (per bbl.)	$0.30	$0.30	$0.30

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

32-36 gas oil	2.00 – 2.25	2.00 – 2.25	2.00 – 2.25
32-36 gas oil, zero	2.25 – 2.50	2.25 – 2.50	2.25 – 2.50
14-16 fuel oil (per bbl.)	$0.40 –$0.45	$0.40 –$0.45	$0.40 –$0.45

ARKANSAS (Ark., N. La. and Miss. destination)

32-36 gas oil	2.00 – 2.25	2.00 – 2.25	2.00 – 2.25
32-36 gas oil, zero	2.25 – 2.50	2.25 – 2.50	2.25 – 2.50
28-30 gas oil	†2.00	†2.00	†2.00
20-24 fuel oil (per bbl.)	$0.525–$0.55	$0.525–$0.55	$0.525–$0.55
9-12 fuel oil (per bbl.)	$0.425–$0.45	$0.425–$0.45	$0.425–$0.45
Black oil	3.00	3.00	3.00

CALIFORNIA (F. o. b. refinery.)

14-18 fuel oil (per bbl.)	$0.40 –$0.55	$0.40 –$0.55	$0.45 –$0.55
14-18 Bunker oil (per bbl.)	$0.55 –$0.75	$0.55 –$0.75	$0.55 –$0.75
30-34 gas oil (per bbl.)	$0.85 –$0.95	$0.85 –$0.95	$0.90 –$1.00
27 Plus Diesel oil (per bbl.)	$0.80 –$0.90	$0.80 –$0.90	$0.80 –$0.90

PETROLATUMS

PENNSYLVANIA (Per pound, in barrels, carload lots, f. o. b. Penna. refinery. In tank cars ¼c to ½c per pound less.) Quotations are from majority of refiners.

Snow White	6.75 – 7.50	6.75 – 7.50	6.75 – 7.50
Lily White	5.75 – 6.50	5.75 – 6.50	5.75 – 6.50
Cream White	4.75 – 5.50	4.75 – 5.50	4.75 – 5.50
Light Amber	2.625– 3.25	2.625– 3.25	2.625– 3.25
Amber	2.375– 3.00	2.375– 3.00	2.375– 3.00
Red	2.00 – 2.75	2.00 – 2.75	2.00 – 2.75

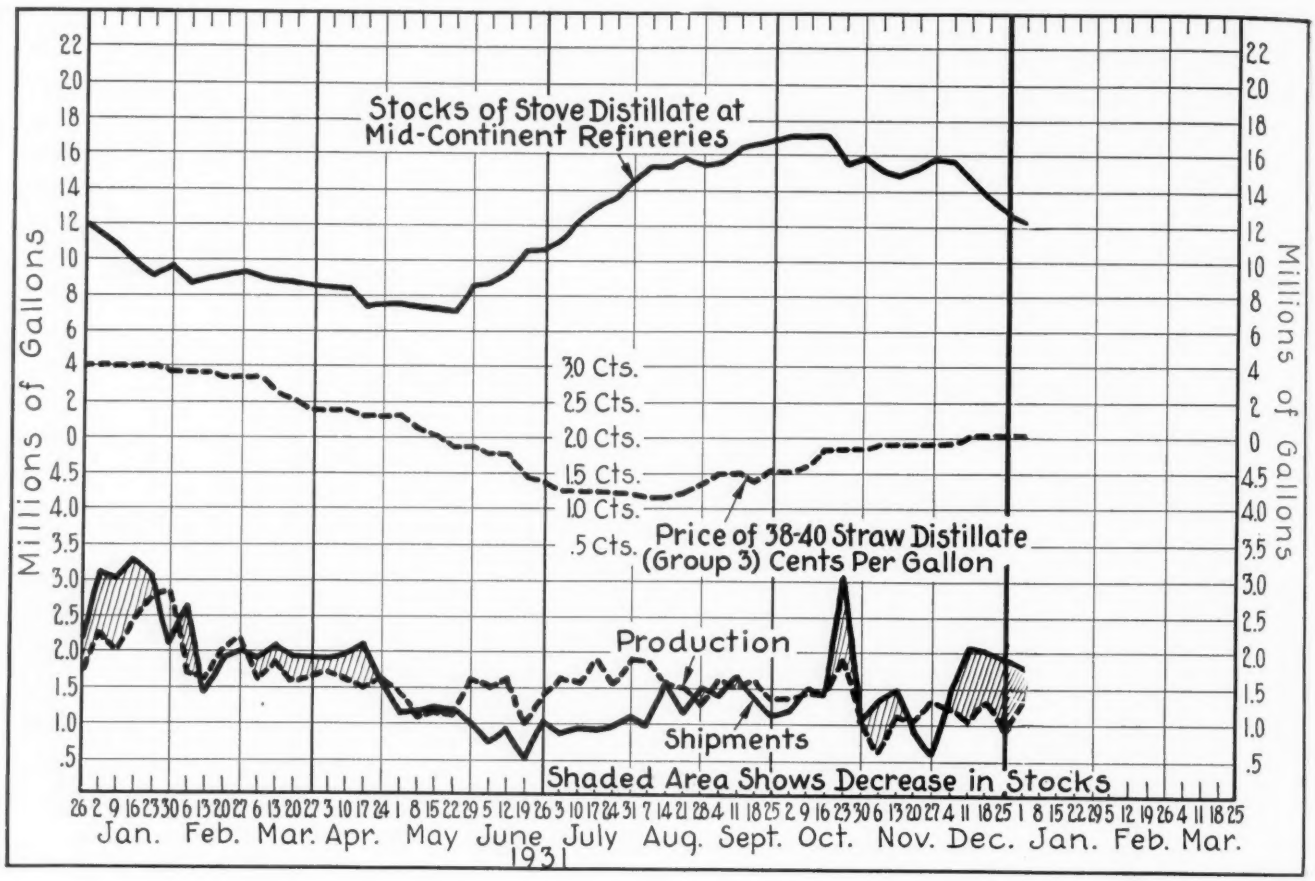
PETROLEUM COKE

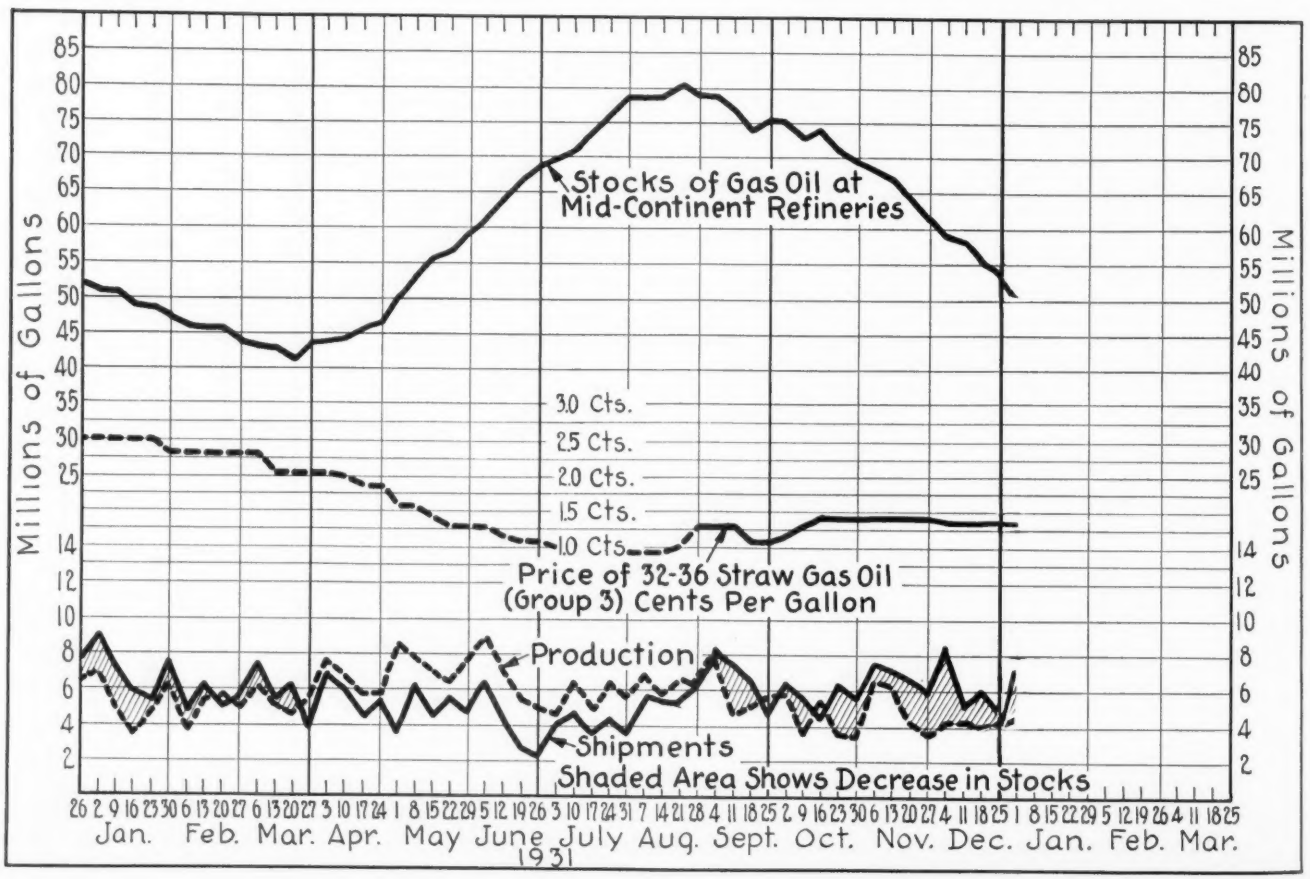
****OKLAHOMA** (F. o. b. Oklahoma refineries)
(Per ton in car lots)

Lump	$3.00 –$4.00	$3.00 –$4.00	$3.00 –$4.00
Still run	$2.00	$2.00	$2.00
Breeze	$0.75 –$1.00	$0.75 –$1.00	$0.75 –$1.00

Barometer of Mid-Continent Refinery Market—Week Ending January 1

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News


Stocks of Stove Distillate at Mid-Continent Refineries
Millions of Gallons
3.0 Cts.
2.5 Cts.
2.0 Cts.
1.5 Cts.
1.0 Cts.
.5 Cts.
Price of 38-40 Straw Distillate (Group 3) Cents Per Gallon
Production
Shipments
Shaded Area Shows Decrease in Stocks
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.
1931


Stocks of Gas Oil at Mid-Continent Refineries
Millions of Gallons
3.0 Cts.
2.5 Cts.
2.0 Cts.
1.5 Cts.
1.0 Cts.
Price of 32-36 Straw Gas Oil (Group 3) Cents Per Gallon
Production
Shipments
Shaded Area Shows Decrease in Stocks
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.
1931

Merit is always recognized...

It takes the choicest Pennsylvania Crude
the most modern refinery equipment
an able technical staff
experienced craftsmen
to produce oils like these:

PENNSYLVANIA WINTER OILS

Free Flowing at Lowest Winter Temperatures

Viscosities	Pour Tests
50/55 @ 210	Below 0° F.
60/65 @ 210	Below 0° F.
75/80 @ 210	Below 0° F.
85/90 @ 210	Below 0° F.

Also higher viscosities, if desired

The established good-will of Pennsylvania Motor Oil need not be a "frozen asset" this winter!

TANK CARS ONLY

FRANKLIN CREEK REFINERY
at Franklin, Pennsylvania

DAUGHERTY REFINERY
at Petrolia, Pennsylania

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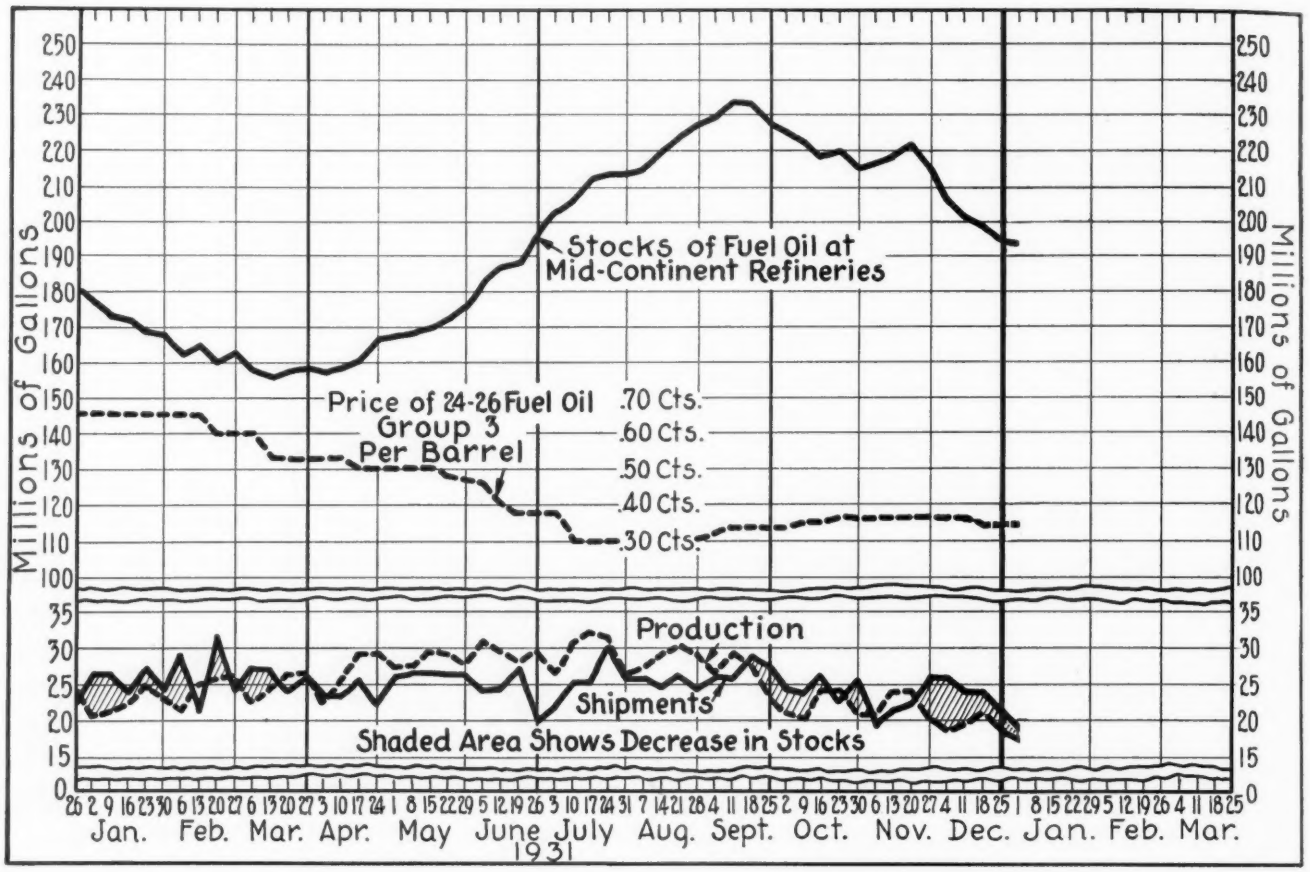
W. H. Daugherty & Son Refining Co.

88 LEXINGTON AVE.
NEW YORK

820 TOWER COURT
CHICAGO

Barometer of Mid-Continent Refinery Market—Week Ending January 1

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News


Millions of Gallons
Millions of Gallons
Stocks of Fuel Oil at Mid-Continent Refineries
Price of 24-26 Fuel Oil Group 3 Per Barrel
.70 Cts.
.60 Cts.
.50 Cts.
.40 Cts.
.30 Cts.
Production
Shipments
Shaded Area Shows Decrease in Stocks
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.
1931

California Refinery Market

Trading Generally Continues Quiet

LOS ANGELES, Dec. 31

PACIFIC coast markets were unusually dull over the short year-end week, with little or no interest shown in goods for export and disturbances threatening wholesale and retail gasoline price schedules in the domestic market.

Increased inquiries were reported early in the week from buyers in the Orient, Java, and South America for cased kerosine and gasoline and for bulk fuel oil. On the latter commodity suppliers expected to have to shade current quotations of $0.55 to $0.70 per barrel in order to meet Gulf competition. Recent spot sales of fuel have been made at prices ranging from $0.57 to $0.63.

Nominal quotations of 4 cents and up for gasoline for intercoastal shipment were still out of line with the Gulf and local exporters did not anticipate any actual business until east coast markets improved.

Conditions in the southern California gasoline markets were particularly unsettled. Reports indicated loss of gallonage to price-cutters by major marketing companies might precipitate a downward revision of price schedules. Several independent refiners were quoting tank car and tank truck and trailer prices of 9 to 9.5 cents at the refinery, tax included. From this spread prices ranged up to 11.5 cents for major brands.

As a result of the lowered independent price, retail gasoline sales in the Los Angeles basin were made over a range of 11 cents, on some "no-brand" products, to the 16 cents maintained at major company-owned stations. Indications were that the competitive price-sign policy might again be adopted to combat the cut-rate dealer, or failing this, that a general reduction would be made in the posted tank wagon price.

Early in the week a major company granted concessions to its dealers operating in certain sections of the Pacific northwest, permitting them to meet the competition offered by "bootleg" gasolines. This was equivalent to a 2-cent reduction and may be permanent if the situation does not improve.

Movement of California gasoline into the adjacent states of Nevada and Arizona and into Utah has been greatly hampered through competition offered by suppliers in the Mid-Continent. Current quotations range from 6 cents up, with few spot sales reported.

Quotations for tank car movement of natural gasoline ranged from 5.5 cents up. Warm weather resulted in a shading of quotations on gas oil in tank cars. Some domestic kerosine was reported available at 3.5 cents although generally prices ranged from 4 to 4.75 cents.

Issues Rules for Handling Gasoline in Kansas

TULSA, Jan. 2—Rules governing the marking of vehicles transporting gasoline in Kansas, which became effec-

tive Dec. 12, have been issued by the state fire marshal.

The regulations cover the type of barrels, tanks and other containers that may be used. They are virtually the same as the rules governing equipment approved by the I. C. C.

All tanks and containers used for transporting gasoline must have exposed to unobstructed view on rear and both sides placards plainly reading "gasoline." The letters must be red with a white background, and the letters are to be not less than 6 inches in height. All portable containers must be painted red and labeled "gasoline."

Pennsylvania Markets

Kerosine Demand Continues Good

CLEVELAND, Jan. 4.—Kerosine continued to feature the Pennsylvania refinery market in the short trading week between Christmas and New Year. Prices moved up another 0.125 cent. Demand for other commodities was slow. Prices of some oils continued to fall; lubricating oil prices, however, looked as though they had touched bottom for the current movement.

Demand for kerosine was consistently good throughout the week. Some refiners continued to comb the market for surplus offerings and jobbers were ordering liberal quantities. The bull market in kerosine has progressed so far without the usual seasonal cold weather; in some quarters, the opinion was expressed that there might be a runaway kerosine market if a cold snap were to spread over the eastern territory.

The price lists of several refiners quoted U. S. Motor gasoline, with low knock rating, at 4.125 cents and 45 w.w. kerosine at 4.375 cents. Demand for motor fuel throughout the early days of the week was unusually slow. Refiners in some instances said that jobbers apparently were more desirous than ever before of keeping year-end inventories as low as possible. The supply of gasoline continued greatly in excess of demand and prices suffered as a result.

Fuel oil demand picked up considerably. It was not sufficient, however, to improve the price situation. Gas companies were the most active buyers. In Warren district, where practically no fuel oil was available, refiners quoted as high as 3 cents. In other districts, however, the 36-40 grade was still rather freely offered at 2.25 cents and up.

The inquiry for lubricating oils continued to improve and prices showed resistance to the downward move that has been under way for more than two months.

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Eastern Domestic Markets

Gasoline Demand Improves

Staff Special

NEW YORK, Dec. 31

GASOLINE markets along the Atlantic seaboard became more active as the last week of 1931 ended. Prices for tank car lots remained steady, while barge prices were lower. Demand for heating oils in New England increased, while gasoline consumption declined. Heating oil prices were advanced slightly.

Barge buyers were much more active in the market at New York harbor. Sales were made at 5 to 5.25 cents for barge loads of gasoline. The majority of tank car buyers were purchasing on a hand-to-mouth basis feeling uncertain about the trend of the market in 1932.

The Philadelphia market was quiet with no change noted in prices. The Baltimore market was active in some quarters and quiet in others. The majority of sales were made at 5.5 cents for the lower octane material and 5.75 cents for the minimum 65 octane gasoline. Some price shading was reported.

Gasoline markets in New England were quiet with the little spot business available going at 6.5 cents at Boston and Providence and 7 cents at Portland. Heating oils were the center of attention in New England. Demand continued excellent. Prices were raised 0.25-cent by some marketers to 4.75 cents for furnace oil.

Bunker oil continued to be quoted at $0.60 per barrel and diesel oil was posted at $1.30 at both Boston and New York.

Gulf Coast Markets

Cargo Prices Steady

Staff Special

NEW YORK, Dec. 31.—The market for cargo lots of light and heavy oils at the Gulf entertained no new business during the last week of 1931. The offer of a cargo of 65 octane gasoline for coastwise shipment featured the market late in the week. The supplier indicated that a price under 5 cents would be accepted for early January shipment. The offer was withdrawn before the week ended, disposal of the material having been arranged for by the supplier's domestic marketing company.

Buyers of cargo lots of gasoline along the Atlantic seaboard have shown little interest in the spot market the past two months. In most instances current requirements have been purchased under contracts at more profitable prices.

In the export market little was known as to buyers' activities. Suppliers were waiting to see what the New Year would bring and only a nominal interest in affairs was noted. Prices for the export grades of light oils remained generally unchanged.

A cargo of Grade C bunker oil was offered for January shipment at $0.38 per barrel. The majority of suppliers were asking $0.40 and up for this oil.

American Moves

CHICAGO, Dec. 31.—The American Petroleum Co. has moved to larger quarters on the 17th floor of the same building in which they were located, 310 So. Michigan Avenue.

The Keitels Greet Us

ST. LOUIS—A tailor-made Christmas and New Year greeting was sent out by E. J. Keitel, president of the Columbia Oil Co., marketer and compounder of St. Louis.

It is a copy of a pen and ink drawing, having reproduced on it the faces of Mr. and Mrs. Keitel, their young son, and their snow-covered English style home, at one corner of which a carpenter is building an extension to house Miss Gloria, who is seen arriving via Stork Express in the upper right hand corner of the card.

The family is engaged in snowballing "Ye Old Year," which takes the form of a silk-hatted snow man on the front lawn.

Wax Markets

Holiday Quiet Prevails

NEW YORK, Dec. 31.—Wax markets were in the throes of their dull season. Few sales were made in either New York or New Orleans during the mid-holiday week just ended. Prices were generally unchanged for both the fully refined and scale waxes.

Program for Minnesota Marketers' Meeting

MINNEAPOLIS, Jan. 2.—Five addresses are scheduled for the Minnesota convention of the Northwest Petroleum Association here Jan. 14 and 15.

Thursday morning the directors meet at 10:30 and the general session starts with luncheon. The afternoon speakers are George H. Griffith, chief oil inspector, on "The Handling and Collection of the Tax on Minnesota Petroleum Products"; O. J. McClure, Chicago, on "Better Salesmanship and Better Profits"; and J. Howard Pile, editor of Chek-Chart, Chicago, on "Greater Profits From Specialized Lubrication."

There are two addresses Friday afternoon. Mr. McClure speaks on "Actually Making the Sale," and E. L. Barringer NATIONAL PETROLEUM NEWS staff writer, speaks on "The Independent and the Future."

Friday morning there will be a code meeting, open to everyone. There will be a stag supper Thursday evening.

Okla. Truck Licenses Show Gross Load

TULSA, Jan. 2.—Truck operators in Oklahoma will have to buy license tags in 1932 based on the actual tonnage to be hauled by the truck instead of on the factory rating of the truck, according to a ruling made public by the Oklahoma Tax Commission recently.

The operator of a 1½-ton truck, for example, must have a license tag for a 3-ton truck, if that operator uses a trailer which carries 1½ tons. Any truck found operating with a load weighing more than the license tag denotes was issued for that truck will be halted, the tag confiscated and a tag issued for the full capacity of truck and trailer with the owner of the truck having to pay the difference in the fees between the smaller and the larger capacity license tags.

The Commission also has announced that the tags will be marked with the capacity truck for which they were issued, and the tags must be obtained from the commission's local agents.

As a result of this ruling the Petroleum Motor Transport Association has been called into special session by the president for the evening of Jan. 5, to discuss what steps, if any, can be taken with reference to the ruling.

Oil companies heretofore have been in the habit of obtaining their licenses at Oklahoma City and thereby saving the additional notary and other fees incident to each procedure.

On The Lazy Bench

Another Think

Irate Player: "I wasn't out!"

Sarcastic Umpire: "You wern't huh? Well, you just have a look at the newspaper tomorrow."

—Refinings,
El Dorado Refining Co.

* * *

Wasted Effort

Mrs. Bunk: "I caught your daughter kissing the iceman this morning."

Mr. Bunk: "Good heavens! Wasting time on him when we owe the grocer fifty dollars!"

—The Gas Line
West Penn Oil Co.

* * *

The president of the local gas company was making a stirring address.

"Think of the good the gas company has done," he orated. "If I were permitted a pun, I should say, 'Honor the Light Brigade'."

And one customer immediately shouted: "Oh, what a charge they made."

—The Gas Line
West Penn Oil Co

* * *

Why do they put so many holes in Swiss cheese when its the limburger that really needs the ventilation?

—The Safe Worker
National Safety Council

* * *

Big-Hearted

Buck: "I've bought the little lady a machine of her own."

Bass: "Packard, Lincoln, Marmon or Buick?"

Buck: "Maytag."

—The Pure Oil News
The Pure Oil Co.

* * *

We've Wondered, Too

"Paw!"

"Now what, Sonny?"

"Why didn't Noah swat both flies when he had such a good chance?"

—The Safe Worker
National Safety Council

* * *

The man who brags, "I run things in my house," usually refers to the lawn mower, washing machine, vacuum sweeper, baby carriage and the errands.

—Indiana Petroleum Marketer
The Indiana Petroleum Association

* * *

"I asked her if I could see her home."

"What did she say?"

"She said she would send me a picture of it."

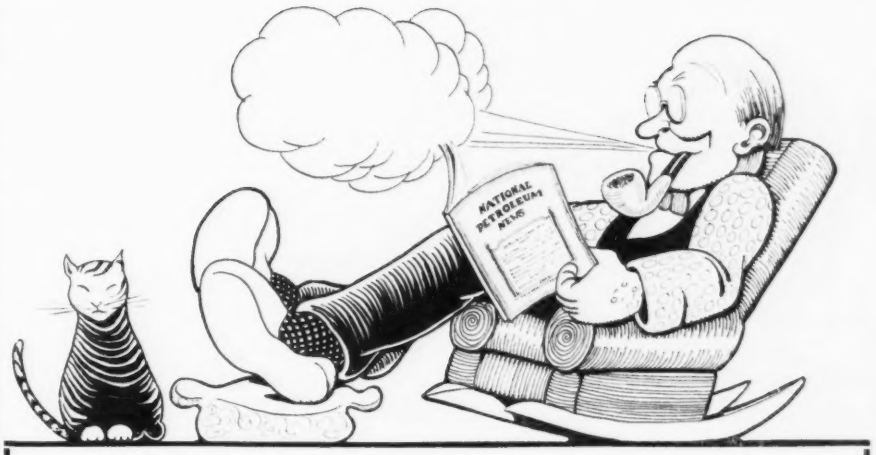
—Our Sun
Sun Oil Co.

* * *

Song of the Highway

Lives of motorists remind us
On a Sunday afternoon,
That some drive as if they like to
Try and end them pretty soon.

—The Safe Driver
National Safety Council



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Eastern Domestic Market

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, representing majority of sales and quotations. Prices shown below do not include inspection tax levied in Florida and South Carolina.)

	Prices Jan. 4	Prices Dec. 28	Prices Dec. 21
U. S. MOTOR GASOLINE, Below 65 Octane Number			
New York harbor	5.25 – 5.50	5.50	5.50
Boston	6.25	6.25	6.25
Providence	6.25	6.25	6.25
Philadelphia District	5.50	5.50	5.50
Baltimore District	5.25 – 5.50	5.50	5.50
U. S. MOTOR GASOLINE, 65 Octane Number and Above			
New York harbor	5.50 – 5.75	5.75	5.75
Portland district	7.00	7.00	7.00
Boston district	6.50	6.50	6.50
Providence district	6.50	6.50	6.50
Philadelphia district	5.75	5.75	5.75
Baltimore district	5.50 – 5.75	5.75	5.75
Norfolk district	6.00 – 6.50	6.50	6.50
Charleston district	6.00 – 6.50	6.50	6.50
Savannah district	6.00 – 6.50	6.50	6.50
Jacksonville district	6.00 – 6.50	6.50	6.50
‡DOMESTIC AVIATION GASOLINE			
New York harbor	9.00 –11.00	9.00 –11.00	9.00 –11.00
Philadelphia	10.00 –11.00	10.00 –11.00	10.00 –11.00
Baltimore	10.00 –11.00	10.00 –11.00	10.00 –11.00
Boston	10.00 –11.00	10.00 –11.00	10.00 –11.00

‡Prices are based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167°F. and not less than 122°F.; 50% recovery at 221°; 90% at 311°; 96% at 347° end point 374°F. Gasoline of fighting grade specifications in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

WATER WHITE KEROSINE			
New York harbor	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00
Philadelphia district	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00
Baltimore district	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00
GAS OIL: 28-34 Gravity			
New York harbor	3.50	3.50	3.50
Boston district	3.75	3.75	3.75
FURNACE OIL: 36-40 Gravity			
New York harbor	4.50	4.50	4.50
Boston district	4.50 – 4.75	4.50	4.50
GRADE C BUNKER OIL (Lighterage 5c per bbl. additional)			
New York harbor	$0.60	$0.60	$0.60
Boston district	$0.60	$0.60	$0.60
DIESEL OIL			
New York harbor	$1.30	$1.30	$1.30

New York Export Market

(Lubricating oils in cents per gal. in bbls. F.a.s. New York, except where otherwise noted)

	Jan. 4	Dec. 28	Dec. 21
CYLINDER OILS (Pennsylvania Products)			
Bright stock, No. 8 color	26.00 –27.00	26.00 –27.00	26.00 –27.00
Bright stock, No. 6½ color diluted	25.00 –26.00	25.00 –26.00	25.00 –26.00
600 D filtered	26.00 –27.00	26.00 –27.00	26.00 –27.00
600 Warren E filtered	22.50 –23.00	22.50 –23.00	22.50 –23.00
600 stm. refd. unfiltered	17.50 –18.50	17.50 –18.50	17.50 –18.50
650 stm. refd. unfiltered	20.00 –21.50	20.00 –21.50	20.00 –21.50
600 flash steam refined	21.50 –22.00	21.50 –22.00	21.50 –22.00
630 flash, steam refined	26.00 –27.00	26.00 –27.00	26.00 –27.00
RED PARAFFIN OILS (Vis. 100°) (Prices represent bulk shipment in tankers F.a.s. New York).			
300 vis. No. 6½ color	10.00 –11.00	10.00 –11.00	10.00 –11.00
250 vis. No. 6 color	9.00 –10.00	9.00 –10.00	9.00 –10.00
200 vis. No. 6 color	8.25 – 9.00	8.25 – 9.00	8.25 – 9.00
PALE PARAFFIN OILS (Vis. 100°) (Prices represent bulk shipment in tankers F.a.s. New York).			
230 vis. No. 3¾ color	11.50 –12.00	11.50 –12.00	11.50 –12.00
180 vis. No. 3¼ color	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
100 vis. No. 2¼ color	6.00 – 7.00	6.00 – 7.00	6.00 – 7.00

Wax Market

(Prices in cents per pound, f. a. s. carload lots. Tests made by A.S.T.M. method with melting points converted into A.M.P. by adding 3° F.)

NEW YORK	Jan. 4	Dec. 28	Dec. 21
124-126 Yellow crude scale	1.90 – 2.00	1.90 – 2.00	1.90 – 2.00
122-124 White crude scale	2.00 – 2.125	2.00 – 2.125	2.00 – 2.125
124-126 White crude scale	2.00 – 2.125	2.00 – 2.125	2.00 – 2.125
123-125 Fully refined	2.875– 3.00	2.875– 3.00	2.875– 3.00
125-127 Fully refined	2.875– 3.00	2.875– 3.00	2.875– 3.00
128-130 Fully refined	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125
130-132 Fully refined	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50
133-135 Fully refined	4.125– 4.25	4.125– 4.25	4.125– 4.25
135-137 Fully refined	4.375– 4.50	4.375– 4.50	4.375– 4.50
NEW ORLEANS			
124-126 Yellow crude scale	1.90 – 2.00	1.90 – 2.00	1.875– 2.00
122-124 White crude scale	2.00	2.00	1.90 – 2.00
124-126 White crude scale	2.00	2.00	1.90 – 2.00
123-125 Fully refined	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875
125-127 Fully refined	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
128-130 Fully refined	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125
130-132 Fully refined	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50
133-135 Fully refined	4.125– 4.25	4.125– 4.25	4.125– 4.25

Gulf Coast Bulk Market

(Prices are f. o. b. Gulf oil terminals representing sellers' opinions covering bulk shipments of 20,000 barrels or more, for export and / or coastwise shipment unless otherwise noted.)

GASOLINE	Prices Jan. 4	Prices Dec. 28	Prices Dec. 21
U. S. MOTOR GASOLINE (Domestic shipment)			
Below 65 octane number	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75
65 octane number and above	5.00 – 5.25	5.00 – 5.25	5.00 – 5.25
41-43 w.w. kerosine	4.125– 4.375	4.125– 4.375	4.125– 4.375
Export Shipment			
U.S. Motor gasoline	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75
60-62, 400 e.p. gasoline	4.625– 4.875	4.625– 4.875	4.625– 4.875
61-63, 390 e.p. gasoline	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
64-66, 375 e.p. gasoline	5.00 – 5.25	5.00 – 5.25	5.00 – 5.25
U. S. Motor, (cases cargoes)	$1.50	$1.50	$1.50
64-66, cases (cargoes)	$1.60	$1.60	$1.60
KEROSINE			
*41-43 water white	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
41-43 prime white	3.75 – 4.00	3.75 – 4.00	3.75 – 4.00
Water white, cases (cargoes)	$1.40	$1.40	$1.40
Prime white, cases (cargoes)	$1.30	$1.30	$1.30

*Previous to Dec. 14, prices are on 44 w.w. kerosine.

GAS & BUNKER OILS			
*26-30 translucent gas oil	2.125– 2.75	2.125– 2.375	2.125– 2.375
*30 plus translucent gas oil	2.375– 3.00	2.375– 2.50	2.375– 2.50
Grade C bunker oil, for ships' bunkers, per bbl.	$0.45	$0.45	$0.45
Grade C bunker oil, per bbl. in cargoes	$0.38 –$0.45	$0.40 –$0.45	$0.40 –$0.45

*Less than ½ of 1% sulphur.

MEXICAN CRUDE AND BUNKER OILS (f. o. b. Steamer, Tampico)			
Heavy Panuco crude taxes to be paid, per bbl.	$0.50 –$0.53	$0.50 –$0.53	$0.50 –$0.53
Grade C bunker oil for bunkering, taxes paid, per bbl.	$0.55	$0.55	$0.55
SOUTH TEXAS LUBRICATING OILS (Viscosity at 100°F. cold test 0 Tanker, f. o. b. Gulf oil terminals.)			
100 vis. No. 2 unfiltered pale	4.375– 4.50	4.375– 4.50	4.375– 4.50
200 vis. No. 3 unfiltered pale	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
300 vis. No. 3 unfiltered pale	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
500 vis. No. 3½ unfiltered pale	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
750 vis. No. 4 unfiltered pale	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
1200 vis. No. 4 unfiltered pale	11.75 –12.25	11.75 –12.25	11.75 –12.25
200 vis. No. 5-6 red oil	5.00 – 5.50	5.00 – 5.50	5.00 – 5.50
300 vis. No. 5-6 red oil	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
500 vis. No. 5-6 red oil	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
750 vis. No. 5-6 red oil	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
1200 vis. No. 5-6 red oil	13.00 –13.50	13.00 –13.50	13.00 –13.50

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

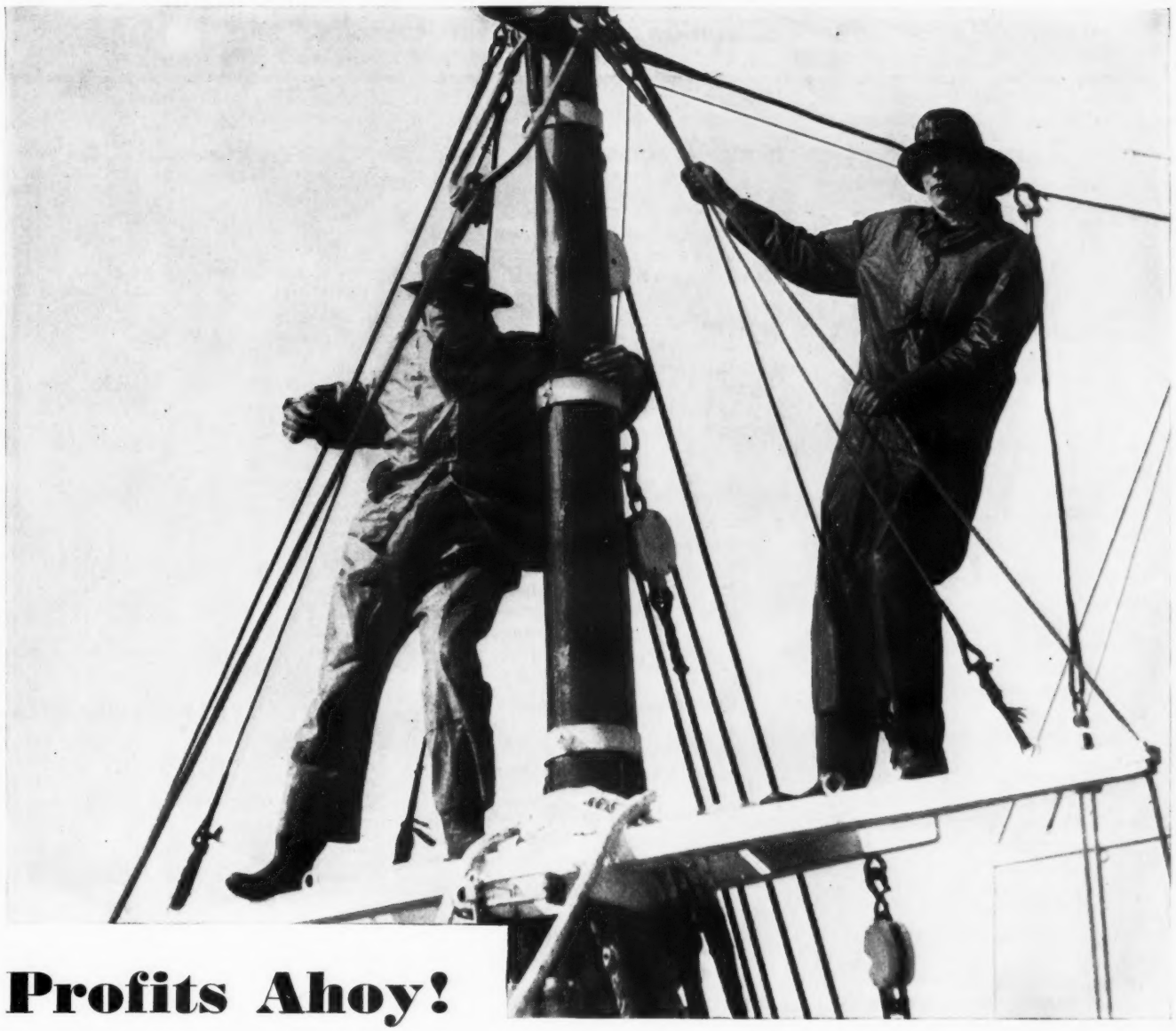
	Jan. 4	Dec. 28	Dec. 21
Gasoline, U. S. Motor, 53-55 Gravity	3.875– 4.50	3.875– 4.50	3.875– 4.50
Gasoline, U. S. Motor-blends and special cuts	.....	Discontinued	4.125– 4.75
Gasoline, 400 e.p. blend	4.375– 5.00	4.375– 5.00	4.375– 5.00
Gas oil, 30-34 per bbl.	$0.78 –$0.90	$0.78 –$0.90	$0.78 –$0.90
Diesel Oil, 27 plus, per bbl.	$0.80 –$0.90	$0.80 –$0.90	$0.80 –$0.90
Bunker oil, 14-18 per bbl.	$0.55 –$0.70	$0.55 –$0.70	$0.55 –$0.70
Fuel oil, 14-18 per bbl.	$0.55 –$0.70	$0.55 –$0.70	$0.55 –$0.70
Kerosine, 38-40 w.w., 125-150 flash, per gal.	4.25 – 4.75	4.25 – 4.75	4.25 – 4.75
Cased Goods			
Gasoline, U. S. Motor	$1.35 –$1.50	$1.35 –$1.50	$1.35 –$1.50
Gasoline, 400 e.p. blend	$1.45 –$1.65	$1.45 –$1.65	$1.45 –$1.65
Kerosine, 38-40 w.w., 125-150 flash	$1.15 –$1.35	$1.15 –$1.35	$1.15 –$1.35
Kerosine, prime white	$1.05 –$1.15	$1.05 –$1.15	$1.05 –$1.15

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling; to U. S. ports, cents per barrel.

	Jan. 4			
	Crude &/or Fuel		Refined Oil &/or Spirits	
	Last Paid	Owners Ask	Last Paid	Owners Ask
Calif.-U.K./Continent*	12/6	15/-20/	17/6	17/-18/
Gulf-U.K./Continent*	7/	8/-10/	9/	9/-10/
Calif.-N. Atlantic (not E. of N. Y.)	47.5c	45-50c	43c	43-45c
Gulf-N. Atlantic** (not E. of N. Y.)	14c	14-15c	17c	14-16c

*Continental ports in range between Bordeaux and Hamburg, both inclusive.
**Venezuela loading same rate; Tampico, 2 to 3c per bbl. additional.



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For the sake of your net profits in 1932, see your DeVilbiss distributor whenever spray-painting equipment is being considered.

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Tank Wagon, Service Station Markets for Gasoline and Kerosine

(OIL PRICE HANDBOOK has t.w. and s.s. markets for a whole year, arranged for quick reference)

These Prices in Effect January 4, 1932, as Posted by Principal Marketing Companies

Latest Changes in Tank Wagon Prices

Gasoline

Atlantic Refining—T.w. and s.s. cut 4/10c, Richmond, to 16.5c and 17.5c respectively, including 5c tax, **Dec. 11.**

S. O. Ohio—S.s. only cut 1c thru Ashland county, to 17c, including 4c tax, **Dec. 30.**

S. O. Kentucky — Crown changes:

T.w. and s.s. up 2c, Mobile, both to 19.5c, including 8.5c tax, **Dec. 16.**

T.w. and s.s. cut ½c, Montgomery, both to 20c, including 7c tax, **Dec. 17.**

T.w. and s.s. cut 1c, Jackson, both to 15.5c, including 5.5c tax, **Dec. 19.**

S.s. only cut 1c, Jacksonville, to 20c, including 7c tax, **Dec. 18.**

T.w. and s.s. cut 1c, Tampa, both to 19c, including 7c tax, **Dec. 21.**

Kyso Green changes:

T.w. and s.s. up 2c, Mobile, both to 18c, including 8.5c tax, **Dec. 16.**

T.w. and s.s. cut ½c, Montgomery, both to 18.5c, including 7c tax, **Dec. 17.**

T.w. and s.s. cut 1c, Jackson, both to 14c, including 5.5c tax, **Dec. 18.**

S. O. Indiana—Red Crown t.w. only cut ½c, Grand Rapids, to 15.2c, including 4c tax, **Dec. 24.**

Red Crown and Stanolind Blue t.w. and s.s. cut 1c, thru Oklahoma due to tax decrease to 4c, **Dec. 31.**

Correction: Red Crown s.s. price at Bartlesville has been in error since Nov. 18 issue at 14c. Correct price was 15c, effective Oct. 9. Up 1c, to 16c, in general advance of **Nov. 6.** This correction supercedes any others which may have been published previously.

Correction: Stanolind Blue s.s. price at St. Joseph has been in error since Dec. 16 issue at 7c. Correct price is 8.9c, including 2c tax, effective since **Nov. 6.** Price is corrected in this issue.

Stanolind Blue t.w. only cut 1c, Chicago, to 12.5c, including 3c tax, **Dec. 17.**

Stanolind Blue s.s. only cut ½c, Mankato, to 12.5c, including 3c tax, **Dec. 11.**

S. O. Louisiana—Standard gasoline t.w. advanced ½c generally thru Louisiana, Tennessee and Arkansas, **Dec. 31.** Exceptions: New Orleans and Lake Charles unchanged. Alexandria t.w. and s.s. cut ½c. Memphis s.s. up ½c. Bristol t.w. only up 1c.

Magnolia Petroleum—Maximum Mileage changes:

T.w. and s.s. up 1c thru Arkansas and Oklahoma, except Muskogee s.s. unchanged, **Dec. 23.**

T.w. and s.s. up 1c, thru Texas, **Dec. 24.**

Blue Gasoline changes:

T.w. and s.s. up 1c thru Arkansas, **Dec. 23.**

T.w. and s.s. up 1c, thru Texas, **Dec. 24.**

Maximum Mileage and Blue gasoline t.w. and s.s. prices cut 1c thru Oklahoma due to tax decrease to 4c, **Dec. 31.**

S. O. California — Tank truck and retail prices cut ½c, Reno, to 16c and 20c respectively, including 4c tax, **Dec. 29.**

Aviation Gasoline

S. O. Indiana — Correction: Total t.w. price for St. Louis has been in error since April 15 issue at 15.9c. Correct price should have been 15.4c as ½c city tax does not apply on aviation gasoline. Present price is 16.4c, effective **Nov. 6.**

Continental Oil—T.w. cut 1c, Cheyenne, to 18c, including 4c tax, **Nov. 7.**

T.w. cut 1c, Albuquerque, to 21c, including 5c tax, **Nov. 7.**

Kerosine

S. O. Kentucky—Kerosine t.w. cut 2c, Atlanta, to 10.5c, **Dec. 15.**

S. O. NEW JERSEY TERRITORY

	Standard Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Atlantic City, N. J.	12.7	3	15.7	16.7	11.5
Newark, N. J.	11.7	3	14.7	15.7	10.5
Annapolis, Md.	12.2	4	16.2	17.2	10
Baltimore, Md.	11.4	4	15.4	16.4	8
Cumberland, Md.	13.2	4	17.2	18.2	12
Washington, D. C.	11.9	2	13.9	14.9	10.7
Danville, Va.	13	5	18	19	11.8
Norfolk, Va.	11.5	5	16.5	17.5	10.3
Petersburg, Va.	12.5	5	17.5	18.5	11.3
Richmond, Va.	11.5	5	16.5	15.5	10.7
Roanoke, Va.	13.2	5	18.2	17.2	12
Charleston, W. Va.	12.7	4	16.7	17.7	11.5
Keyser, W. Va.	13.3	4	17.3	18.3	12.1
Parkersburg, W. Va.	11.4	4	15.4	16.4	10.2
Wheeling, W. Va.	12.6	4	16.6	17.6	11.4
Charlotte, N. C.	11.5	6	17.5	17	10.7
Hickory, N. C.	13.8	6	19.8	20.8	12.6
Mt. Airy, N. C.	13.7	6	19.7	20.7	12.5
Raleigh, N. C.	13.4	6	19.4	20.4	12.2
Salisbury, N. C.	13.7	6	19.7	20.7	12.5
Charleston, S. C.	11.5	6	17.5	18.5	10.3
Columbia, S. C.	13.4	6	19.4	20.4	12.2
Spartanburg, S. C.	13.7	6	19.7	20.7	12.5

Discounts: gasoline, 2c per gallon discount off retail t. w. price to dealers thru S. O. New Jersey territory, except Maryland, New Jersey and Washington, D. C. where discount is 3c.

S. O. NEW YORK

	T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Greater New York City: Boroughs of Manhattan, Bronx, Queens & Kings	10.3	2	12.3	14.3	9
Borough of Richmond	10.7	2	12.7	14.7	9
Albany, N. Y.	11.6	2	13.6	14.6	9.5
Buffalo, N. Y.	11	2	13	14	8.5
Rochester, N. Y.	11	2	13	14	8.5
Syracuse, N. Y.	11.8	2	13.8	14.8	9
Boston, Mass.	10.5	3	13.5	14.5	8.5
Augusta, Me.	12.8	4	16.8	17.8	9
Manchester, N. H.	11.4	4	15.4	16.4	8.5
Burlington, Vt.	13.3	4	17.3	18.3	9
New Haven, Conn.	12.6	2	14.6	15.6	8.5
Providence, R. I.	9.5	2	11.5	12.5	8.5

Discounts: on gasoline 2c per gal. off posted t.w. price to dealers, thru territory, except 3c to dealers in New York City.

ATLANTIC REFINING

Pittsburgh, Pa.	12	3	15	16	11
Philadelphia, Pa.	11	3	14	15	11
Allentown, Pa.	12	3	15	16	11
Erie, Pa.	12	3	15	16	11
Scranton, Pa.	12	3	15	16	11
Altoona, Pa.	12	3	15	16	11
Dover, Del.	12	3	15	16	11
Wilmington, Del.	12	3	15	16	11
Boston, Mass.	10.5	3	13.5	14.5	10
Springfield, Mass.	11.5	3	14.5	15.5	10
Worcester, Mass.	11.3	3	14.3	15.3	8.5
Fall River, Mass.	9	3	12	13	8.5
Providence, R. I.	9.5	2	11.5	12.5	8.5
Hartford, Conn.	12.5	2	14.5	15.5	10
New Haven, Conn.	12.6	2	14.6	15.6	10
Atlantic City, N. J.	12.7	3	15.7	16.7	11.5
Camden, N. J.	11.8	3	14.8	15.8	10.6
Trenton, N. J.	12.2	3	15.2	16.2	11
Annapolis, Md.	12.2	4	16.2	17.2	10
Baltimore, Md.	11.4	4	15.4	16.4	8
Hagerstown, Md.	11.5	4	15.5	15.5	11.7
Richmond, Va.	11.5	5	16.5	17.5	10.7
Wilmington, N. C.	11.6	6	17.6	18.6	10.4
Brunswick, Ga.	13	6	19	*19	*13
Jacksonville, Fla.	13	7	20	20	11

Discounts: on gasoline to dealers: "split dealers," 2c off posted t.w. price; to 100% dealers, 2.5c of t.w.; to authorized dealers (under lease 1c per gal.), 2.5c off posted s.s. price.

Commercial accounts, under contract for one year, are sold at a discount off the posted prices, with due consideration to competition.

*Georgia kerosine prices include 1c state tax. 2c off t.w. price of oil and off s.s. price gasoline to dealers Nov. 16, 1931, at Brunswick.

S. O. OHIO

Sohio X-70

Ohio statewide	13	4	17	18	13
Ashland, Clark, Defiance, Erie, Greene, Hancock, Lake, Marion, Miami, Preble, Sandusky, Williams and Wyandot counties:	13	4	17	17	13
Ashtabula, Butler, Montgomery & Pickaway counties	12	4	16	16	13

Renown Green (Third Grade)

Sells generally 2c under s.s. price of Sohio X-70. To resellers, discount is 1½c below Renown Green s.s. price. Not sold to consumers.

Ohio statewide				16	13

Discounts: on Sohio X-70 gasoline, to dealers and commercial consumers generally thru Ohio, 2c per gal. off t.w. price except in counties where prices are below statewide schedule discount is generally 3c.

Above prices include these inspection fees on both gasoline and kerosine, per gallon, figured on basis of 50 gallons per barrel:

Alabama, 1/40c on gasoline, 1/2c on kerosine; Arkansas, 1/5c per gal. in a single barrel, 1/20c per gal. in bulk; Florida, 1/8c; Illinois, 3/100c; Indiana, 1/2c per gal. in a single barrel; 3/10c per gal. in lots of 2 to 10 bbls., 1/5c for 10 to 50 bbls., 2/25c for over 50 bbls.; Kansas, 1/50c, (3/50c can be charged to meet inspection department expenses); Louisiana, 1/32c; Minnesota, 2/25c; Nebraska, 3/50c; North Carolina, 1/4c; North Dakota, 1/20c; Oklahoma, 2/25c per gal. in lots of more than 50 bbls., 1.5c in lots less than 50 bbls.; South Carolina, 1/8c; South Dakota, 1/10c; Tennessee, 2/5c per gal. on gasoline, 3/5c on kerosine; and Wisconsin, 1/25c.

Kerosine inspection fees only: Iowa, 2/25c; Michigan, 4/5c per gal. for first 2 bbls.; 3.5c for next 3; 2/5c for next 5; 3/10c for next 15; and 1.5c per gal. in lots over 25 bbls.

Tank Wagon, Service Station Markets for Gasoline and Kerosine

These Prices in Effect January 4, 1932, as Posted by Principal Marketing Companies

S. O. KENTUCKY

Crown Gasoline

	T.W.	Tax	Gasoline Total T.W.	S.S.	Oil T.W.
Lexington, Ky.	12	5	17	18	12
Louisville, Ky.	11	5	16	17	11
Paducah, Ky.	12	5	17	18	12
Covington, Ky.	13	5	18	19	12
Jackson, Miss.	10	5.5	15.5	15.5	11.5
Vicksburg, Miss.	12.5	5.5	18	18	8
Birmingham, Ala.	13	‡‡6	19	19	10
Mobile, Ala.	11	‡8.5	19.5	19.5	10
Montgomery, Ala.	13	*7	20	20	13.5
Macon, Ga.	14	6	20	20	†12
Atlanta, Ga.	13	6	19	19	*10.5
Augusta, Ga.	14	6	20	21	†14
Savannah, Ga.	13	6	19	19	†13
Jacksonville, Fla.	13	7	20	20	11
Miami, Fla.	14	7	21	22	13
Tampa, Fla.	12	7	19	19	12
Pensacola, Fla.	12	**8	20	20	13

Kyso Green (Third Grade)

					Oil
Lexington, Ky.	10	5	15	15	12
Louisville, Ky.	9	5	14	14	11
Paducah, Ky.	10	5	15	15	12
Jackson, Miss.	8.5	5.5	14	14	11.5
Vicksburg, Miss.	11	5.5	16.5	16.5	8
Birmingham, Ala.	11.5	‡‡6	17.5	17.5	10
Mobile, Ala.	9.5	‡8.5	18	18	10
Montgomery, Ala.	11.5	*7	18.5	18.5	13.5
Atlanta, Ga.	11.5	6	17.5	17.5	*10.5
Macon, Ga.	12.5	6	18.5	18.5	†12

Discounts: on gasoline, 2c per gal. off t.w. price to dealers thru S. O. Kentucky territory.

At Atlanta, 1c special temporary discount on gasoline in Addition to 2c general discount, effective Oct. 6; also 3c discount off t.w. price of kerosine to dealers.

*Montgomery gasoline tax includes 5c state tax, 1c county tax, and 1c local privilege tax. Kerosine price includes ½c tax.

†Georgia kerosine prices include 1c state tax.

**Pensacola gasoline tax includes 7c state tax and 1c city tax.

‡Mobile gasoline tax includes 5c state tax, 1c city tax and 2.5c Mobile County tax.

‡‡Birmingham gasoline tax includes 5c state tax and 1c city tax.

S. O. INDIANA

Standard Red Crown Gasoline

Chicago, Ill.	12	3	15	15	9
Decatur, Ill.	12.4	3	15.4	15.4	9
E. St. Louis, Ill.	11.7	3	14.7	12.7	8.2
Joliet, Ill.	12.4	3	15.4	15.4	9
Peoria, Ill.	12.4	3	15.4	14	9
Quincy, Ill.	12.2	3	15.2	15.2	8.8
Springfield, Ill.	12.4	3	15.4	15.4	9
Indianapolis, Ind.	12.3	4	16.3	16.3	10 1
Evansville, Ind.	12.1	4	16.1	16.1	9.9
South Bend, Ind.	12.4	4	16.4	16.4	8
Detroit, Mich.	11.5	3	14.5	14.5	10.7
Grand Rapids, Mich.	12.2	3	15.2	15.2	10.6
Saginaw, Mich.	10.1	3	13.1	13.1	10.8
Marquette, Mich.	12.9	3	15.9	15.9	10.8
Green Bay, Wisc.	12.6	4	16.6	16.6	9.4
Madison, Wisc.	12.3	4	16.3	16.3	9.1
Milwaukee, Wisc.	12.1	4	16.1	16.1	8.9
La Crosse, Wisc.	13.2	4	17.2	17.2	10
Minneapolis, Minn.	11.4	3	14.4	14.4	9.9
Duluth, Minn.	13.5	3	16.5	16.5	9.9
Mankato, Minn.	13.1	3	16.1	16.1	8
Des Moines, Ia.	9.9	3	12.9	12.9	8
Davenport, Ia.	12.5	3	15.5	12.9	9.3
Sioux City, Ia.	12.1	3	15.1	15.1	8.9
Mason City, Ia.	12.5	3	15.5	15.5	19.3
St. Louis, Mo.	*11.9	2	13.9	13.9	8.3
Kansas City, Mo.	†12.9	2	14.9	14.9	7.6
St. Joseph, Mo.	† 8.4	2	10.4	10.4	7.5
Fargo, N. D.	14.9	3	17.9	17.9	11.9
Grand Forks, N. D.	15.2	3	18.2	18.2	12.2
Minot, N. D.	14.9	3	17.9	17.9	11.9
Pierre, S. D.	13	4	17	17	10.4
Huron, S. D.	13.3	4	17.3	17.3	10.7
Wichita, Kans.	10.8	3	13.8	13.8	6
Bartlesville, Okla.	9	4	13	15	7

*Includes city tax of ½c.
†Includes city tax of 1c.

Stanolind Blue Gasoline

Stanolind Blue prices are 1.5c per gal. under Red Crown, except at following points:

					Oil
Chicago, Ill.	9.5	3	12.5	12.5	9
E. St. Louis, Ill.	10.2	3	13.2	10.7	8.2
Peoria, Ill.	10.9	3	13.9	12	9
Quincy, Ill.	9.2	3	12.2	12.2	8.8
St. Joseph, Mo.	†6.9	2	8.9	8.9	7.5
St. Louis, Mo.	*8	2	10	10	8.3
Detroit, Mich.	9.5	3	12.5	12.5	10.7
Grand Rapids, Mich.	11.2	3	14.2	13.2	10.6
Saginaw, Mich.	8.2	3	11.2	11.2	10.8
Wichita, Kans.	9.3	3	12.3	10.8	6
Bartlesville, Okla.	7.5	4	11.5	13	7
Mankato, Minn.	11.6	3	14.6	12.5	8
Minneapolis, Minn.	8.9	3	11.9	11.9	9.9
Evansville, Ind.	10.6	4	14.6	14	9.9
Davenport, Ia.	11	3	14	10.9	9.3
Des Moines, Ia.	8.9	3	11.9	10.9	8
Sioux City, Ia.	10.6	3	13.6	10.9	8.9
Green Bay, Wisc.	12.1	3	15.1	14.6	9.4
La Crosse, Wisc.	11.7	4	15.7	15	10

*Includes city tax of ½c.
†Includes city tax of 1c.

Discounts: Q.D.A., effective May 11, 1931, on gasoline: **To re-sellers,** thru territory, except Chicago: (See also additional discounts effective Nov. 4, shown in last paragraph.)

Under 75,000 gals., off service station price: Ethyl, 3c Red Crown, 2.5c and Stanolind Blue, 1.5c per gal.; 75,000 gals. and over, off tank wagon price; Ethyl, 4c, Red Crown, 3.5c, and Stanolind Blue, 2c.

In Chicago, in any quantity, discounts are 4c per gal. on Ethyl gasoline, 3.5c on regular motor fuel grades and 2c on "third" grades, by principal marketing companies, discounts being off service station prices in quantities up to 75,000 gallons, and off t.w. price in quantities of 75,000 gallons and over. **To consumers,** thru territory, except Chicago:

1,000 to 75,000 gals., off tank wagon price: Ethyl, 3c; Red Crown, 2.5c; and Stanolind Blue, 1.5c; 75,000 gals. and over, off tank wagon price, Ethyl, 4c; Red Crown, 3.5c; and Stanolind Blue, 2c.

In Chicago, in quantities over 1,000 gallons: Ethyl gasoline, 4c; regular grades 3.5c; "third" grades 2c, all discounts being off tank wagon price.

Effective Nov. 4, 1931, any tank wagon buyer taking 25 or more gallons at one delivery receives 1c discount off t.w. price at time of delivery thru territory. Customers holding resellers contracts continue to receive all their discount at time of delivery as formerly. Customers holding Q.D.A. contracts receive 1c at time of delivery and remainder at end of month. No change made in total discounts to contract customers. Tank wagon buyers who formerly failed to purchase enough to get discount, now get 1c off.

S. O. NEBRASKA

Red Crown Gasoline

Omaha, Neb.	10.9	4	14.9	15.9	9.25
McCook, Neb.	11	4	15	15	7.5
Norfolk, Neb.	12.75	4	16.75	17.75	9.75
North Platte, Neb.	13.75	4	17.75	18.75	10.5
Scottsbluff, Neb.	13	4	17	17	9

Discounts: on gasoline to dealers, off normal service station prices: Red Crown Ethyl 3c; Red Crown 2.5c per gal.

S. O. LOUISIANA

Standard Gasoline

	Posted Retail T.W.	Tax	Total Posted Retail T.W.	Posted Retail S.S.	Oil T.W.
Little Rock, Ark.	12	6	18	18	11
Alexandria, La.	8.5	*6	14.5	14.5	†12
Baton Rouge, La.	12	5	17	17	†12
New Orleans, La.	8.5	*6	14.5	14.5	*10
Lake Charles, La.	10.5	*6	16.5	16.5	†12
Shreveport, La.	12	5	17	17	†12
Lafayette, La.	12	*6	18	18	†12
Bristol, Tenn.	13	7	20	20	14
Chattanooga, Tenn.	14	7	21	21	11
Knoxville, Tenn.	14.5	7	21.5	21.5	13.5
Memphis, Tenn.	10.5	7	17.5	17.5	11
Nashville, Tenn.	13.5	7	20.5	20.5	12.5

Blue-Gas (Third Grade)

	Tax		Total Posted Retail S.S.	Oil T.W.
Little Rock, Ark.	6	....	12	11
Alexandria, La.	*6	....	12.5	†12
Baton Rouge, La.	5	....	11.75	†12
New Orleans, La.	*6	....	12.5	*10
Lafayette, La.	*6	....	16	†12
Lake Charles, La.	*6	....	15	†12
Shreveport, La.	5	....	11	†12
Chattanooga, Tenn.	7	....	16	11
Knoxville, Tenn.	7	....	18	13.5
Memphis, Tenn.	7	....	14	11
Nashville, Tenn.	7	....	16	12.5

Discounts: on gasoline and kerosine, in S. O. La. territory: To dealers and commercial consumers from the tankwagon, 2c per gal. off posted retail tank wagon price.

*Lake Charles, Alexandria, New Orleans and Lafayette gasoline tax includes 5c state tax and 1c parish tax. New Orleans kerosine price includes 1c parish tax in addition to 1c state tax.

†Kerosine price in Louisiana includes 1c state tax.

MAGNOLIA PETROLEUM

Maximum Mileage Gasoline

	T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Muskogee, Okla.	8	4	12	13	6
Oklahoma City.	10	4	14	16	7
Tulsa, Okla.	10	4	14	16	8
Fort Smith, Ark.	12.5	5	17.5	18	11
Little Rock, Ark.	12.5	6	18.5	18	11
Texarkana, Ark.*	10	4	14	16	8
Dallas, Tex.	11	4	15	16	8
El Paso, Tex.	12	4	16	18	10
Fort Worth, Tex.	11	4	15	16	7
Houston, Tex.	10	4	14	16	8
San Antonio, Tex.	10	4	14	16	7

Blue Gasoline

					Oil
Muskogee, Okla.	7	4	11	11	6
Oklahoma City.	8	4	12	12	7
Tulsa, Okla.	8	4	12	12	8
Fort Smith, Ark.	9	5	14	14	11
Little Rock, Ark.	7	6	13	13	11
Texarkana, Ark.	7	4	11	11	8
Dallas, Tex.	9	4	13	13	8
Fort Worth, Tex.	9	4	13	13	7
Houston, Tex.	9	4	13	13	8
San Antonio, Tex.	9	4	13	13	7

Discounts: on Blue gasoline, 1c per gal. off t.w. price to dealers. Fort Smith and Little Rock Maximum Mileage gasoline and kerosine prices are subject to 2c per gal. discount to dealers off t.w. price.

*Within city of Texarkana, the state tax on gasoline is 4c per gal. conforming with the Texas state tax. In this district outside of the city the 6c Arkansas tax applies.

†Fort Smith gasoline prices include Oklahoma tax of 5c; outside Fort Smith. Arkansas tax of 6c applies.

CONTINENTAL OIL

Denver, Colo.	8	4	12	15	12.5
Pueblo, Colo.	8	4	12	15	12
Grand Junc., Colo.	14	4	18	21	14.5
Casper, Wyo.	11	4	15	18	10
Cheyenne, Wyo.	10	4	*14	14	11.5
Butte, Mont.	12	5	17	20	16
Helena, Mont.	16	5	21	24	16
Salt Lake City, Utah.	13.5	4	17.5	20.5	16
Boise, Ida.	16	5	21	24	18
Twin Falls, Ida.	15.5	5	†20.5	20	18
Albuquerque, N. M.	13	5	18	21	14

†3.5c per gal. off t.w. price at Twin Falls to dealers.
*3c per gal. off t.w. price at Cheyenne to dealers.

S. O. CALIFORNIA

	Tax	Tank Truck (Resale)	*Retail Prices	Oil
San Francisco, Cal.	3	12.5	16.5	15.5
Los Angeles, Cal.	3	12	16	15.5
Fresno, Cal.	3	12.5	16.5	17
Phoenix, Ariz.	5	14.5	17	20
Reno, Nev.	4	16	20	19
Portland, Ore.	4	14	18	16.5
Seattle, Wash.	5	15	19	16.5
Spokane, Wash.	5	18.5	22.5	20.5
Tacoma, Wash.	5	15	19	16.5

Discounts: none on gasoline. Tank truck prices are those to all classes of trade; wholesale prices are generally 4c above tank truck prices effective Nov. 16, except at Phoenix, 1c.

*Retail prices are those of Standard Stations, Inc., marketing subsidiary of the Standard Oil Co. of California.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

ONTARIO

Regular Gasoline

	T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Toronto	17.5	5	22.5	26	18.5
Ottawa	18.5	5	23.5	27	19.5
North Bay	21.5	5	26.5	32	22.5
Fort William	19.5	5	24.5	28	17
Border Cities, including Windsor	17.5	5	22.5	26	16.5

Third Grade Gasoline

Toronto		5	....	23.5	18.5

Regular Gasoline

MANITOBA

Winnipeg	19.5	5	24.5	28	16.5

SASKATCHEWAN

Regina	23.5	5	28.5	32.5	20.5

ALBERTA

Edmonton	24.5	5	29.5	33	21.5
Calgary	21	5	26	29.5	18

BRITISH COLUMBIA

Vanocuver	21	5	26	28	22

(Continued on page 76)

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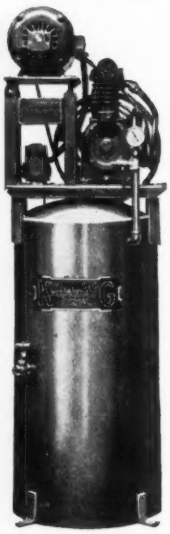

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NATIONAL PETROLEUM NEWS
734 Penton Bldg.
Cleveland, Ohio

Crude Oil Prices (in Effect Jan. 4, 1932)

Crude prices for the whole year in OIL PRICE HANDBOOK published annually

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Penna. Grade Oil in Southwest Penna. Pipe Lines.....$1.55
(Effective Dec. 16, 1931)

Penna. Grade Oil in Eureka Pipe Lines (West Virginia)..... 1.45
(Effective Dec. 16, 1931)

Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.)..... 1.25
(Effective Dec. 16, 1931)

Corning Oil in Buckeye Pipe Lines (Ohio).... 0.85
(Effective Nov. 7, 1931)

Posted by Other Companies

Tide Water Pipe Co., Ltd.:
Bradford-Alleghany district (Penna. and N. Y.).....$1.85
(Effective Dec. 16, 1931)

*The Pennzoil Co.:
Penna. Grade Oil in National Transit Lines*$1.80
(Effective Dec. 16, 1931)

Ashland Refining Co.:
Somerset Oil in Ashland Lines (Kentucky)..$0.80
(Effective Nov. 4, 1931)

Stoll Oil Refining Co.:
Stoll Pipe Line Oil (Kentucky).....$0.75
(Effective Nov. 9, 1931)

*The Pennzoil Co. posts $1.80 in Cochran, Franklin, Hamilton and Doolittle, Pa. fields; prices in other districts range down to $1.75 per bbl. at wells.

MICHIGAN

(Posted by Pure Oil Co.)

Midland, Midland County (Oct. 9, 1931)...$0.55

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective Nov. 3, 1931

Wooster	$1.15	Princeton	$0.95
Lima	1.00	Illinois	0.95
Indiana	0.60	West Kentucky	0.90

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.

Effective Nov. 3, 1931

Petrolia, Ont.....$1.90
Oil Springs, Ont.....$1.97

Effective Aug. 25, 1931

Turner Valley, Alta.:

40-44.9	$1.50	50 and above	$2.65
45-49.9	$2.08		

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Stanolind Crude Oil Purchasing Co.
(In Oklahoma, Kansas, North and North Central Texas)

(Effective Nov. 2, 1931)

Below 29	$0.61	35-35.9	$0.75
29-29.9	0.63	36-36.9	0.77
30-30.9	0.65	37-37.9	0.79
31-31.9	0.67	38-38.9	0.81
32-32.9	0.69	39-39.9	0.83
33-33.9	0.71	40 and above	0.85
34-34.9	0.73		

Effective Nov. 2, 1931, above prices were met by these companies: Humble, The Texas Co., Continental Oil, Barnsdall and Phillips Petroleum; on Nov. 3 by Carter Oil, Sinclair, Pure Oil and Gulf.

Humble's prices affect Ranger, North Texas, Mexia, Powell, Boggy Creek, Wortham, Currie and Moran, Tex.

East Texas

Discontinued by Humble, June 3.

Magnolia posts $0.83 effective Nov. 2, 1931.

Magnolia Petroleum Co.
(In Oklahoma and Texas)
Effective Nov. 2, 1931

Oklahoma:

Cushing, Morrison, Oklahoma City, Seminole, Wewoka and Yale.....$0.83
Cement, Duncan and Walters..... 0.75
Healdton..... 0.52
Hewitt and Graham..... 0.67

Texas:

North and North Central:
Archer, Burkburnett, Comanche, Electra, Henrietta, Olden and Stephens.....$0.83
East Texas.....$0.83

East Central Texas:
Thrall (Effective July 24, 1931).....$0.40

Central Texas:
Mexia, Wortham, Corsicana Light, Panola county and Lytton Springs.....$0.79

Panhandle:
Gray county.....$0.73
Carson-Hutchinson counties.....$0.66

West Texas:
Winkler, Crane, Upton, Howard, Glasscock, and Mitchell counties.....$0.50

South Texas:
Mirando.....$0.75
Darst Creek..... 0.60
Corsicana heavy and Luling..... 0.49

Louisiana-Arkansas
Effective Nov. 4, 1931

North Louisiana:

Bull Bayou.....$0.83
Cotton Valley..... 0.61
Haynesville..... 0.65
Pine Island..... 0.73

Arkansas:

El Dorado and Rainbow.....$0.63
El Dorado, East Field (Calion).....$0.55
Smackover.....$0.55

PANHANDLE TEXAS
Humble Oil & Refining Co.

Effective Nov. 2, 1931

Hutchinson-Carson Counties		Gray County	
Below 35	$0.56		$0.61
35-35.9	.58		.63
36-36.9	.60		.65
37-37.9	.62		.67
38-38.9	.64		.69
39-39.9	.66		.71
40 and above	.68		.73

Above prices met by The Texas Co. on Nov. 2 in Hutchinson, Carson and Gray counties.

WEST TEXAS and NEW MEXICO
Humble Oil & Refining Co.

Effective Nov. 2, 1931

Pecos, Winkler, Crane, Upton, Crockett, Ector, Howard and Glasscock Counties, Tex., and Lea county, N. Mex.....$0.50

Nov. 2, 1931, The Texas Co. same prices in Crane, Upton, Winkler and Lea counties as Humble.

SOUTH and SOUTHWEST TEXAS
(Posted by Humble Oil & Refining Co.)

Effective Nov. 2, 1931

Mirando.....$0.75
Salt Flat..... 0.60
Darst Creek..... 0.60
Pettus, Bee County..... 0.85

(Posted by The Texas Co.)

Effective Nov. 2, 1931

Markham.....$0.67

NORTH LOUISIANA—ARKANSAS FIELDS
Prices of Standard Oil Co. of Louisiana

Caddo, Homer, Haynesville, Bull Bayou, El Dorado Crichton, De Soto, Sabine, Sarepta and Carterville.

Effective Nov. 4, 1931

Below 25	$0.53	33-33.9	.71
25-25.9	.55	34-34.9	.73
26-26.9	.57	35-35.9	.75
27-27.9	.59	36-36.9	.77
28-28.9	.61	37-37.9	.79
29-29.9	.63	38-38.9	.81
30-30.9	.65	39-39.9	.83
31-31.9	.67	40 and above	.85
32-32.9	.69		

Smackover.....$0.55
*Urania, La..... 0.55
†Stephens, Ark.:
Below 29.....$0.51
29 and above..... 0.54

*Urania posted by Louisiana Oil Refining Corp.

†Stephens posted by Atlantic Oil Producing Co. and Louisiana Oil Refg. Corp.

*GULF COASTAL
Posted by Humble Oil & Refining Co.

Effective Nov. 2, 1931

Below 25	$0.70	33-33.9	$0.79
25-25.9	0.71	34-34.9	.80
26-26.9	.72	35-35.9	.81
27-27.9	.73	36-36.9	.82
28-28.9	.74	37-37.9	.83
29-29.9	.75	38-38.9	.84
30-30.9	.76	39-39.9	.85
31-31.9	.77	40 and above	.86
32-32.9	.78		

Refugio heavy.....$0.75

*Includes these fields: Barbers Hill, Goose Creek, Hull, Humble, Liberty, Moss Bluff, Mykawa, Orange, Pierce Junction, Raccoon Bend, Refugio light, Sour Lake, Spindletop, Sugarland and West Columbia.

The Texas Co. met above Gulf Coastal schedule Nov. 2.

Canadian Crude Imports

TORONTO—Canada is taking increasingly large amounts of crude petroleum from Columbia and Peru, where the International Petroleum Co., a subsidiary of the Imperial Oil, Ltd., operates. These two countries for the first ten months of the year have supplied Canada with 862,406,765 gallons of crude or 27 per cent of total crude imports from all sources. For the first ten months of 1930 they supplied Canada with only 18.9 per cent of total crude imports. The recent high premium on United States funds in Canada has accentuated this tendency.

Turner Valley Deliveries

TORONTO—Output of naphtha and crude oil in the Turner Valley field, Alberta, for the first 11 months of 1931 amounted to 1,266,191 barrels of naphtha and light crude, as compared with 1,151,970 barrels for the corresponding period a year ago, thus showing an increase of 9.9 per cent.

November output was 69,082 barrels, as compared with 69,522 in October and 132,287 barrels in November last year. As compared with a year ago, the November decrease was nearly 48 per cent. Restriction of output has been in effect by government order since the end of June last.

Report Out On Foreign Refineries

WASHINGTON, Dec. 28.—More refineries in foreign countries and improvements in refinery technology abroad are reported in a bulletin of the petroleum section of the minerals division of the Bureau of Foreign and Domestic Commerce. This bulletin outlines the present status of oil refining in 38 foreign countries. It may be obtained for 10 cents from the bureau at Washington.

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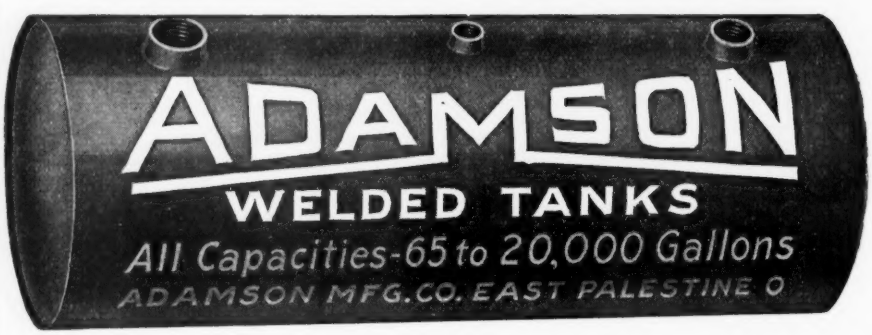


Crude Oil Prices (in Effect Jan. 4, 1932)

(Prices are per barrel at the well)

(Crude Oil Prices for the whole year in OIL PRICE HANDBOOK published annually)

ROCKY MOUNTAIN FIELDS

(Posted by Midwest Refining Co.)

Effective Nov. 2, 1931

Salt Creek, Wyo.:

Below 29°	$0.61	32-32.9	$0.69
29-29.9	0.63	33-33.9	0.71
30-30.9	0.65	34-34.9	0.73
31-31.9	0.67	35-35.9	0.75
36-36.9	$0.77	39-39.9	$0.83
37-37.9	0.79	40 and above	0.85
38-38.9	0.81		

Effective Nov. 3, 1931

Cat Creek, Mont.	$1.05
Hogback, N. Mex.	0.80
Hobbs, N. Mex. (Effective Nov. 2, 1931)	0.50

(Posted by Ohio Oil Co.)

Effective Nov. 3, 1931

Elk Basin, Wyo.	$1.05
Grass Creek Light	1.05
Mig Muddy	0.83
Lance Creek	1.05
Rock Creek	0.85
Sunburst, Mont.	1.00

CALIFORNIA CRUDE

††Standard Oil Co. of California
Effective June 19, 1931

Gravity	Signal Hill *Seal Beach *Alamitos Heights	Huntington Beach	Inglewood	Playa del Roy	Olinda-Brea Canon	Elwood Terrace	Torrance	Richfield	†Whittier †La Habra Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Posted by Union Oil Co. of California June 20, 1931: Athens Rosecrans Dominguez	Santa Paula	Orcutt	‡Ventura Avenue
14-19.9	$0.65	$0.65	$0.65	$0.65	$0.65	....	$0.65	$0.65	$0.65	$0.65	....	$0.55	$0.55	$0.55	$0.55	$0.55	....	$0.65	$0.55	....
20-20.9	.65	.65	.66	.65	.66	....	.65	.65	.65	....	....	.55	.55	.55	.55	....	....	.65	.56	....
21-21.9	.65	.65	.68	.66	.67	....	.65	.66	.65	.65	....	....	.55	.57	.55	.55	....	.65	.57	....
22-22.9	.65	.66	.70	.67	.68		.66	.68	.65	.65	....	....	.56	.59	.55	.55	....	.65	.59	.58
23-23.9	.67	.68	.72	.68	.70	F.o.b. Ship	.67	.70	.65	.66	....	....	.58	.60	.55	.55	....	.65	.61	.60
24-24.9	.69	.70	.74	.69	.72		.68	.72	.65	.67	$0.65	....	.61	.62	.55	.55	$0.69	.66	.63	.62
25-25.9	.71	.72	.76	.70	.74		.70	.74	.65	.69	.65	....	.64	.64	.57	.55	.71	.68	.65	.64
26-26.9	.73	.74	....		.76	....	....	....	....	.71	.65	....	.66	.66	....	....	.73	.70	.67	.66
27-27.9	.75	.76	....		.78	....	....	....	....	.73	.68	....	.68	.67	....	....	.75	.72	....	.68
28-28.9	.77	....	....		.80	....	....	....	....	.75	.71	....	.71	.69	....	....	.77	.74	....	.70
29-29.9	.79	....	....		....	....	....	....	....	.77	.73	....	.74	.71	....	....	.79	.76	....	.72
30-30.9	.81	....	....		....	....	....	....	....	.79	.75	....	.76	.72	....	....	.81	.78	....	.74
31-31.9	....	....	....		....	....	....	....	....	....	.78	....	....	....	....	....	.83	....	....	....
32-32.9	....	....	....		....	....	....	....	....	....	.80	....	....	....	....	....	.85	....	....	....
33-33.9	....	....	....		....	$0.79	....	....	....	....	.83	....	....	....	....	....	.87	....	....	....
34-34.9	....	....	....		....	.81	....	....	....	....	.86	....	....	....	....	....	.89	....	....	....
35-35.9	....	....	....		....	.84	....	....	....	....	.87	....	....	....	....	....	....	....	....	....
36-36.9	....	....	....		....	.87	....	....	....	....	....	....	....	....	....	....	....	....	....	....

*Seal Beach and Alamitos Heights prices end with $0.75 for crude 27 and above.

†Whittier and La Habra crude ends with 22-22.9 gravity.

††Postings on Kettleman Hills, Ventura Avenue, Athens-Rosecrans and Dominguez discontinued by Standard. Kettleman Hills, 30 and above, posted at 66 cents by Associated Oil Co. and General Petroleum Co., June 19, 1931.

‡Posted by Associated Oil Co., June 20, 1931.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders effective on the date shown.

Refiners' Supplies

	Jan. 4	Dec. 28
Soda Ash Light 58% bags, cwt.	$1.15-1.38	$1.15-1.38
Silicate of Soda 60 deg. drums, cwt.	$1.75-1.90	$1.75-1.90
Silicate of Soda 40 deg. tank cars, cwt.	$0.70	$0.70
Silicate of Soda 40 deg. drums, cwt.	$1.00	$1.00
Sal Soda wks.	$0.90-1.20	$0.90-1.20
Caustic Soda 76% solid, cwt.	$2.50	$2.50
Sulfuric Acid 60 deg. tank cars, f. o. b. shipping point per ton	$11.00-12.50	$11.00-12.50
Sulfur, flowers of, cwt.	$3.10-4.00	$3.10-4.00
Liquid Chlorine, tank cars, wks, lb.	1.75	1.75

Compounder's Supplies

	Jan. 4	Dec. 28
Vegetable Oils		
Linseed carloads, spot, lb.	6.90	6.90
Tanks, spot	6.30	6.30
Soya Bean, Tank, coast, lb.	4.75-5.00	4.75-5.00
Oleic Acid		
Distilled, tanks, lb.	6.50	6.50
Distilled, bbls, lb.	7.375	7.375
Saponified, tanks, lb.	6.75	6.75
Saponified, bbls, lb.	7.625	7.625
Lard Oils		
Prime Winter Strained, lb.	10.75	10.75
Extra Winter Strained, lb.	7.25	7.25
Extra, lb.	7.00	7.00
Extra No. 1, lb.	6.50	6.50
No. 1, lb.	6.25	6.25
No. 2, lb.	6.00	6.00
Tallow oil, lb.	7.00	7.00
Neatsfoot Oil		
Pure, bbls, lb.	9.25	9.25
Extra, bbls, lb.	6.75	6.75
No. 1 bbls, lb.	6.50	6.50
Cold Pressed, lb.	13.25	13.25
Fish Oils		
Menhaden Oil		
Light Pressed, gal.	33-34	33-34
Light Pressed, tank cars, N. Y., gal.	27-28	27-28
Yellow bleached, gal.	36-37	36-37
Whale, extra winter bleached, gal.	58-60	58-60
Naval Stores		
Steam distilled turpentine, N. Y., gal.	44	44
Steam, distilled turpentine, Savannah, gal.	41	41
Gum turpentine, N. Y., gal.	50	50
Gum turpentine, f.o.b. cars Savannah, gal.	44	44
Wood Rosin, N. Y., bbl.	$4.75	$4.75
Wood Rosin F, Savn'h, bbl.	$4.55	$4.55
Gum Rosin B, N. Y., bbl.	$3.25	$3.45
Gum Rosin B, f.o.b. cars Savannah, bbl.	$3.50	$2.7
Rosin oil, pure, gal.	47	47
Rosin, oil, compounded, gal.	41	41
Pine Tar		
Kiln burnt	$10.00-11.00	$10.00-11.00
Retort, bbl.	$11.00-12.00	$11.00-12.00
Alcohol		
Denatured Formula 5, in tanks, per gal	24	24

Gasoline Manufacturers Find Method Of Contracting New Grades

Staff Special
TULSA, Jan. 2

WITH the official adoption of new specifications for natural gasoline a majority of manufacturers in the Mid-Continent will use the published prices of Grade 26-70 as the base in writing sales and casinghead gas contracts in 1932. Other grades will sell on a differential based on plant yield.

The stability of other grades as compared to Grade 26-70 will be the principal factor in determining contract prices and quotations on inquiries for those grades. This relative stability will be translated into percentage loss or gain in plant yield in making gasolines other than Grade 26-70.

It has been shown that in passing from one vapor pressure limit to a lower one the plant yield loss is 11 to 15 per cent. With the price of Grade 26-70 as the base, sales managers generally have indicated they will add the percentage loss for each lower vapor pressure limit downward, and subtract it for each vapor pressure limit upward.

Under this plan the sales manager would add, for each vapor pressure limit, 11 to 15 per cent to the price of Grade 26-70 in quoting on the more stable grades, and would subtract that percentage for each vapor pressure limit in quoting on grades more volatile than Grade 26-70.

This swing to one grade as the open market indicator has been coming on for some time. Even before the association in announcing the new specifications[1] late in 1930 stated that the possible 24 grades were decided upon in order to include all the types of present day commercial natural gasoline, and that "it is to be expected that economic conditions will eventually, and probably rapidly reduce the number of grades," manufacturers were making their plants more efficient with the result the volume of the more volatile natural gasolines were disappearing and open market transactions revolved more frequently around Grade AA, which is comparable to Grade 26-70.

Before the end of 1931 the relatively small amount of the more volatile natural gasolines were moved mostly on contracts, and the few spot market quotations made were based for the most part on some differential under the most active product—Grade AA.

Sales managers whose plants made primarily Grade 26-70 had no difficulty in arriving at contract prices. Those whose plants continued to make some of the other grades, however, were at a loss for a time as to a fair basis for contracts, but were quick to recognize the economic soundness of the suggestion of the technical committee of the Natural Gasoline Association with reference to relative plant yields and other production costs. The suggestions of this committee together with a statement of the vapor pressure specification's place as the dominant economic factor were made public recently in the following statement:

"Although the complete economic effects of the new natural gasoline grading system can only be determined by actual use of the specifications in the channels of trade, the only uncertain factors in the equation are the ones bearing on demand in relation to grade. The supply factors have been rather thoroughly analyzed and can be simply stated.

"The vapor pressure specification in the new grading system is the essential economic element. On this specification depend plant yields and the uses to which the product can be put. The sole effective function of the distillation specification is to provide a barrier against abnormal productions or to provide a key to physical properties.

"To properly understand the supply factors created by the new grading system, it should be stated clearly that each gasoline plant is definitely limited as to the number of grades it can produce under the new grading system. If a plant normally produces 26-70 gasoline, it can not normally yield a 26-55 gasoline. If the demand is for a 26-pound gasoline, this plant must sell in a market that requires 70 per cent or more at 140 F. The vapor pressure of its product can not be lowered or raised without raising or lowering the per cent at 140. Very approximately, a decrease of one pound in vapor pressure is accompanied by a decrease of 1 per cent at 140.[2]

"In reducing the product of such a plant to the 22-pound limit it may still maintain its position in the bracket of 70 per cent at 140° or it may be moved slightly within the 55 per cent at 140° bracket. Similar conditions will apply at each vapor pressure limit, because whatever the distillation characteristics may be they are sharply defined and relatively inflexible for each vapor pressure limit.

"These basic distillation characteristics depend on the properties of the pentanes and heavier in the natural gasoline. Fortunately (in the interest of simplicity) the pentanes and heavier of some 80 to 90 per cent of natural gasoline is very much the same, at least in regard to distillation characteristics. From these considerations it follows that the supply of natural gasoline in relation to the distillation characteristics is quite rigidly fixed.

"It has been indicated[3] that the loss in yield due to reductions in vapor pressure of natural gasoline is comparatively unaffected by the characteristics of the pentanes and heavier. The loss in passing from one vapor pressure limit of the new grading system to the next lower limit will be in the neighborhood of 11 to 15 per cent, regardless of the distillation characteristics.

"This condition places all manufacturers on the same plane in regard to the vapor pressure specifications of the new grading system. There is no such flexibility or common basis in regard to the distillation characteristics. *Consequently, the vapor pressure specification is the predominant economic factor as far as supply is concerned.*

"In the reference[3] cited a table was presented showing the price ratios to equalize gasoline plant income. This table was based on theoretical calculations entirely and is reproduced in part below. At one large plant a detailed and lengthy study of the actual plant yields in relation to vapor pressure of product has been made. It will be interesting to compare the results of this practical test with the earlier theoretical calculations. Such a comparison is presented in Table 1.

"In view of the very good agreement of the operating test with theoretical predictions it can be assumed the ratios closely represent average conditions in efficiently operated natural gasoline plants. These ratios consequently afford a basis for determining relative cost of natural gasoline to the manufacturer.

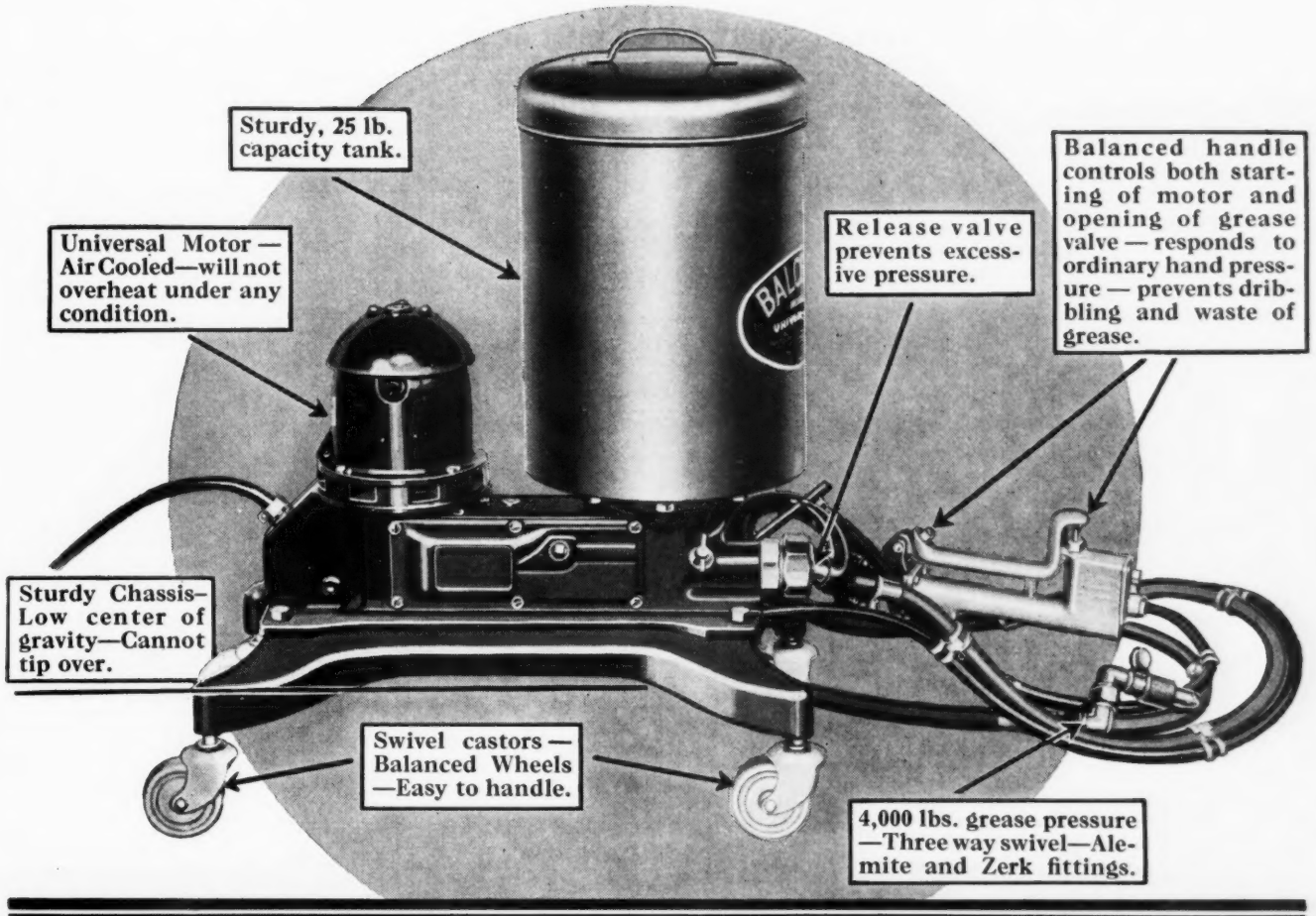
"In such a brief exposition as this, it is impossible to consider all the elements. For example, those desirable factors in anti-knock ratings not adequately defined by octane numbers, such as lead responsiveness and maintenance of anti-knock values over wide operating ranges, are all in favor of natural gasoline. The motoring public is gradually learning the desirable features of volatile motor fuels, for who has not received innumerable complaints about 'third grade' motor fuels? These items can not be appraised mathematically. But it has

[1] National Petroleum News, Dec. 24, 1930, pages 27, 28 and 29.

[2] G. G. Brown, Proceedings of the Tenth Annual Convention Natural Gasoline Association of America, May 20, 1931 (p. 43.)

[3] R. C. Alden—"Some Comments on the New Grading System for Natural Gasoline," Proceedings of the Tenth Annual Convention, N. G. A. A. (p. 38.)

(*Continued on page* 77)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Universal Motor — Air Cooled—will not overheat under any condition.
Release valve prevents excessive pressure.
Balanced handle controls both starting of motor and opening of grease valve — responds to ordinary hand pressure — prevents dribbling and waste of grease.
Sturdy Chassis—Low center of gravity—Cannot tip over.
Swivel castors — Balanced Wheels —Easy to handle.
4,000 lbs. grease pressure —Three way swivel—Alemite and Zerk fittings.

The Highest Quality – Most Efficient Low Priced Electric Lubricator You Can Buy

THE most for your dollar in electric lubricators. Real Balcrank Quality is built into these efficient, new, high pressure Universal Electric Lubricators—Complete for $99.50. Perfectly Engineered—Finest Materials—Workmanship and Appearance are of the best—Strong and Sturdy. Special Air Cooled 110 volt universal electric motor positively will not overheat under any conditions. May be operated continuously at the set pressure of 4,000 lbs. Lubricating the most stubborn bearings without strain on power unit or pumping mechanism. 220 volt universal motors available at slight increase in cost. Instant grease and motor control handle gives steady flow or controlled shot.....Prevents bleeding. Built to Balcrank specifications. Unquestionably the most for your dollar in lubricators.

$99.50 Complete
F.O.B. CINCINNATI, O

BALCRANK UNIVERSAL ELECTRIC LUBRICATOR

The CINCINNATI BALL CRANK Co. CINCINNATI, OHIO.

Transactions in Oil Shares on New York Stock Exchange

1930 High	1930 Low	1931 High	1931 Low	Listed Shares	Par Value	Company	Div. Rate Period	Last Div. Paid	Transactions Week Ended Jan. 2 Sales Shares	High	Low	Last	Week's Change
31½	16½	23	11¼	922,075	N.P.	Amerada Corp.	50cQ	Oct. 30, 31	11,600	14¼	11⅝	13	— ¼
37	5½	12⅜	1¼	209,180	N.P.	American Republics Corp.	....	.....	950	1½	1¼	1⅜	— ⅛
51	30	31	8¾	2,240,000	$25	Associated Oil Co.	....	June 30, 31	500	9⅜	8¾	9⅜	+ 1
51⅜	16⅝	23⅝	8⅜	2,696,650	25	Atlantic Refining Co.	25cQ	Dec. 15, 31	19,684	9⅝	8¾	9¼	+ ⅛
34	8⅝	14½	4	2,257,705	25	Barnsdall Corp. A	....	May 11, 31	29,542	4¾	†4	4⅜	+ ⅛
35	21	25	12	2,060,966	25	California Petroleum Corp.	....	Jan. 1, 29	.....	.....	.....	.....	.....
20⅝	8¾	10¼	7⅛	1,444,970	N.P.	Colonial Beacon Oil Co.	....	.....	600	10	10	10	0
30⅛	7⅜	12	5	4,720,640	N.P.	Continental Oil Co. (Del.)	....	.....	34,650	6¼	5½	6⅛	+ ⅜
71⅛	22⅜	47	9⅝	413,333	N.P.	General Asphalt Co.	50cQ	Dec. 15, 31	5,800	12¾	10½	11⅜	+ ½
116⅛	29¼	68½	15¾	96,475	$100	Houston Oil Co.	....	.....	3,100	19	17	18½	+ ½
11⅜	6⅝	14⅛	3	675,434	25	do new	....	.....	8,010	3½	3⅛	3¼	0
28⅜	3	4⅝	1⅛	556,546	10	Indian Refining Co.	....	Dec. 15, 20	2,700	1½	1⅛	1¼	0
12	3½	4½	1	1,309,100	N.P.	Louisiana Oil Refg. Corp.	....	.....	2,000	1⅜	1	1	— ⅛
90	66	55	20	40,000	$100	do pfd.	$1.62½Q	Nov. 16, 31	10	20	†20	20	— 5
10⅜	1¾	3¾	⅛	330,000	N.P.	Maracaibo Oil Exploration Co.	....	.....	300	⅞	¾	¾	— ⅛
182	150	171	50⅞	459,428	$100	Mexican Petroleum Co.	....	Apr. 20, 31	.....	....	....	....	....
100	100	100	100	120,000	100	do pfd.	$2Q	Oct. 20, 31	.....	....	....	....	....
33	11	16¾	5	1,857,912	N.P.	Mid-Continent Petroleum Corp.	....	Feb. 16, 31	20,400	6	5⅜	5¾	+ ¼
32	16	19½	5⅛	6,648,052	N.P.	Ohio Oil Co.	....	Mar. 14, 31	27,783	5⅞	5⅛	5½	0
64¼	42	35⅛	20	1,000,000	$50	Pan Amer. Pet. & Trans. Co.	40cQ	Oct. 20, 31	.....	....	....	....	....
67½	30	36½	18¾	2,473,916	50	do B non-voting	40cQ	Oct. 20, 31	200	18	18	18	— ¾
12¾	1¾	4¼	⅝	199,370	N.P.	Panhandle Prod. & Refg. Co.	....	.....	.....	....	....	....	....
80	47½	20	5	25,666	$100	do pfd.	....	July 2, 23	30	6	6	6	+ 1
27¼	5⅞	10⅞	2⅞	2,551,084	N.P.	Petroleum Corp. of America	....	June 1, 31	27,850	3½	†2⅞	3¼	— ¼
44¾	11½	16⅝	4	4,419,262	N.P.	Phillips Petroleum Co.	....	Jan. 2, 31	32,552	4¾	4	4¼	— ⅛
2½	½	1½	¼	1,184,917	$25	Pierce Oil Corp.	....	.....	2,600	⅜	¼	¼	0
52	7½	23¾	3½	150,000	100	do pfd.	....	Feb. 1, 22	700	4½	†3½	3⅞	— 1¼
7⅛	1⅜	3⅜	½	2,500,000	N.P.	Pierce Petroleum Corp.	....	Feb. 16, 31	5,800	⅝	½	⅝	0
54	11¼	20⅜	4⅛	2,441,432	$25	Prairie Oil & Gas Co.	....	Mar. 31, 31	12,144	5½	†4⅛	5¼	+ ¼
60	16⅜	26½	5¼	4,050,000	25	Prairie Pipe Line Co.	....	July 1, 31	27,775	6¾	6	6½	+ ⅜
11⅞	1	6	1	749,017	50	Producers & Refiners Corp.	....	Sept. 15, 23	1,000	1½	1⅛	1½	+ ⅜
40	11¼	16	3	56,907	50	do pfd.	....	May 4, 25	450	5¼	3½	3½	+ ⅜
27¼	7⅝	11⅞	3¼	3,038,370	25	Pure Oil Co.	....	Sept. 1, 30	17,000	4½	3¾	4½	+ ⅝
114¼	90½	101⅞	53½	130,000	100	do 8% pfd.	$2Q	Jan. 2, 32	140	59	†53½	59	+ 4
28¼	4⅛	6⅜	⅝	2,126,250	N.P.	Richfield Oil Co. (California)	....	Sept. 1, 30	5,800	⅝	⅜	⅝	+ ¼
25⅜	5	10¼	1¼	1,235,814	N.P.	Rio Grande Oil Co.	....	July 25, 30	5,600	2	1⅞	2	+ ⅛
56½	36⅞	42⅝	13	617,443	$13.40	Royal Dutch Co. (N. Y. Shares)	93.85c	Aug. 4, 31	8,000	14⅞	13¼	14⅛	+ ⅜
37	9¾	20¾	5½	1,244,383	N.P.	Seaboard Oil of Del.	....	Oct. 15, 24	15,500	7	6⅛	7	+ ½
48¾	26	34	5	63,852	£2	Shell Transp. & Trading Co.	72.6c	July 23, 31	910	5¼	5	5	0
25½	5¼	10¼	2½	13,070,625	N.P.	Shell Union Oil Corp.	....	June 30, 30	31,900	3	†2½	3	— ⅛
106¼	55	78	15	400,000	$100	do pfd.	....	July 1, 31	4,550	19	†15	19	+ 3½
37	5⅝	11	3½	869,271	10	Simms Petroleum Co.	....	Sept. 15, 30	3,300	4⅝	3⅝	4½	+ ⅜
32	9¾	15⅞	4¼	6,103,263	N.P.	Sinclair Cons. Oil Corp.	....	Apr. 15, 31	71,100	4⅞	4⅛	4⅜	+ ⅛
112¼	86	103	64	141,294	$100	do pfd.	$2Q	Nov. 14, 31	100	64	64	64	— 1
42	10¼	12⅞	2	1,000,069	25	Skelly Oil Co.	....	Dec. 15, 30	5,800	2¾	2⅛	2⅝	+ ⅝
99¾	42	62	10	120,000	100	do pfd.	....	May 1, 31	1,900	13⅛	11¾	13	+ ⅞
.....	.....	21	8⅜	31,273,328	25	Socony Vacuum Corp.	25cQ	Dec. 15, 31	84,800	9¼	†8⅜	9⅛	+ ⅛
106⅝	98	105¼	87½	764,935	100	S. O. Export Corp. pfd.	$2.50S.A.	Dec. 31, 31	400	87¾	87⅜	87¾	+ ½
75	42¼	51¾	23⅛	13,102,900	N.P.	S. O. California	62½cQ	Dec. 15, 31	34,808	25½	23⅝	24⅛	0
49	14⅜	19	7¾	320,000	$25	S. O. Kansas	.....	Mar. 16, 31	1,800	10	9¼	9¼	— ¾
84⅞	43½	52½	26	25,639,466	25	S. O. New Jersey	††25cQ	Dec. 15, 31	85,365	28½	26⅛	27	+ ¼
70	39	45¼	26¾	1,544,349	N.P.	Sun Oil Co.	25cQ	Dec. 15, 31	1,400	29⅞	29	29	0
108½	97¾	104½	75	100,000	$100	do pfd.	$1.50Q	Dec. 1, 31	220	78¾	†75	75	— 5
9⅜	¾	1¾	¼	776,979	N.P.	Superior Oil Corp.	.....	.....	4,100	⅜	⅛	⅜	+ ⅛
60½	28¼	36¼	9⅞	9,851,211	$25	The Texas Corp.	50cQ	Jan. 1, 32	60,000	12	10¼	11⅜	+ ¼
14½	4	6½	2	930,432	10	Texas Pacific Coal & Oil Co.	....	Dec. 31, 29	8,900	2¼	1⅞	2	— ⅛
17¾	5⅞	9	2⅛	5,997,872	N.P.	Tide Water Associated Oil Co.	.....	Feb. 16, 31	15,420	2¾	†2⅛	2⅝	+ ⅛
89¾	53	68	20½	732,649	$100	do pfd.	$1.50Q	Jan. 2, 32	3,340	29	25	25	0
31	12	18	10½	2,191,823	N.P.	Tide Water Oil Co.	.....	June 30, 31	.....	....	....	....	....
94⅞	68	83	30	199,446	$100	do pfd.	$1.25Q	Nov. 16, 31	1,600	33	†30	33	— 1⅞
50	20⅛	26⅝	11	2,225,302	25	Union Oil Co. of California	50cQ	Nov. 10, 31	6,600	12¾	12	12¾	+ ¼
38½	23	25⅛	16	1,254,048	N.P.	Union Tank Car Co.	40cQ	Dec. 1, 31	3,900	20	16	19	+ 3
27	4¼	7⅜	⅞	769,531	N.P.	Warner Quinlan Co.	....	July 3, 30	5,733	1⅛	†⅞	1	— ⅛
21	6½	9⅜	2¾	428,967	N.P.	H. F. Wilcox Oil & Gas Co.	....	May 10, 28	3,300	2⅛	2¾	2¾	— ⅛

*New high †New low ††Also extra—S. O. New Jersey 25c. Total sales 772,016

New York Bonds

Week Ending Dec. 31, 1931

	High	Low	Last	Change
Asso. Oil Gold 6s	98½	98½	98½	—1½
Atlantic Refg. deb. 5s	90½	89	89	—1½
Cal. Pet. 5s	60	60	60	+3
Cal. Pet. 5½s	63	62	62	—1
General Pet. 5s	98½	96	97¼	— ¾
Humble Oil & Refg. 5s	99½	98¼	99	+ ¼
Humble Oil & Refg. 5½s	99¾	99⅛	99¾	+ ¼
Pan Amer. P. & T. 6s	100	100	100	0
Pan Amer. P. & T. 6s	12½	12½	12½	— ½
Pan Amer. P. & T. 6s ctfs.	13	10½	10½	—2¾
Phillips Pet. 5½s	50	45	50	+2½
Pure Oil 5½s	71	67¾	70	— ½
Pure Oil 5½s	69	66	67½	— ½
Richfield Oil of Calif. 6s	11¾	10½	10½	—1⅜
Shell Union Oil 5s	59	57¾	58¼	+ ¼
Shell Union Oil 5s with war.	59	57¾	58¼	+ ¼
Sinclair Con. Oil 7s	74	71	74	+3
Sinclair Con. Oil 6½s	72	64½	72	+4⅞
Sinclair Con. Crude 5½s	93	90¼	92	+1
Sinclair Pipeline 5s	91½	88	90	— ¼
S. O. N. J. 5s	100½	99¾	100¼	+ ¼
S. O. N. Y. 4½s	89	85	89	+1¾
Union Oil of Calif. 6s A	95¼	95	95	0
Union Oil of Calif. 5s war.	72	70	70¼	+ ¼
Warner-Quinlan 6s	28½	28	28	— ½
White Eagle Oil 5½s	97	95	96⅞	—1⅛

CHICAGO.—Jan. 6 Standard Oil Co. of Indiana will advance tank wagon and service station prices of gasoline, kerosine and naphtha 1/10 cent per gallon through its territory, except Chicago, Detroit and St Louis, due to increase in freight rates.

Changes in Tank Wagon Prices

(Continued from page 69)

QUEBEC

Regular Gasoline

	Total T.W.	Tax	T.W.	S.S.	Oil T.W.
Montreal	17.5	5	22.5	26	19.5
Quebec City	20.5	5	25.5	29	21.5
Three Rivers	20.5	5	25.5	29	21.5

NEW BRUNSWICK

St. John	20	5	25	29	22
Moncton	20	5	25	29	22

NOVA SCOTIA

Halifax	20	5	25	29	22

PRINCE EDWARD ISLAND

Charlottetown	20	5	25	29	22

NAPHTHA PRICES

	Oleum Spirits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago	11.7	13.7	15.2
Detroit	14.4	15.9	16.7
Kansas City	†12.9	†14.4	†15.2
Milwaukee	13.4	*18.9	*19.7
Minneapolis	**17.7	**19.2	**20
St. Louis	12.6	14.1	14.9
New York	...	12	17
Boston	...	17	17

*Includes 4c state tax. †Includes 1c city tax.
**Includes 3c state tax.

Petroleum Spirits (Solvent)

Tank Cars (F.o.b. refinery or seaboard terminal)	
New York Harbor	9.00
Philadelphia district	9.00
Providence	9.50
Tank Wagon or Steel Barrels	
New York City	12
Syracuse	16
Rochester	14
Buffalo	‡14
Providence	17
Boston	17
Bridgeport	15
Newark	13
Philadelphia	14
Lancaster	17
Altoona	17
Baltimore	15

Note: 2c off above t.w. prices to large buyers in some instances.
‡Buffalo price is net.

Aviation Gasoline Prices

Following are tank wagon prices of aviation gasoline in principal marketing territories showing state and municipal taxes:

S. O. NEW JERSEY

Prices in Effect Jan. 4, 1932

	T.W.	Tax	Total T.W.
Newark, N. J.	14.9	*	14.9
Baltimore, Md.	14.9	4	18.9
Washington, D. C.	15	2	17

*New Jersey road tax of 3c does not apply on aviation gasoline, exemption being claimed at time of purchase.

All above prices are on Stanavo Aviation Gasoline.

COLONIAL BEACON OIL CO.

New York City	16	2	18
Boston, Mass.	18	3	21

Aviation Gasoline Prices

S. O. PENNSYLVANIA

	T.W.	Tax	Total T.W.
Philadelphia, Pa.	15	3	18
Pittsburgh, Pa.	16	3	19
Altoona, Pa.	16	3	19

S. O. OHIO

Thru Ohio	14	4	18

Discounts given by S. O. Ohio: For delivery to airports only; 2,000 gals. or over per month, 1c per gal.; 6,000 gals. or over per month, 2c; 12,000 gals. and over per month, 3c; 24,000 gals. and over per month, 4c.

S. O. INDIANA

Chicago	15	3	18
Indianapolis, Ind.	15.3	4	19.3
Detroit, Mich.	15.8	3	18.8
Milwaukee, Wis.	15.1	4	19.1
Minneapolis, Minn.	16.2	3	19.2
St. Louis, Mo.	14.4	2	16.4
Kansas City, Mo.	14.9	3	17.9
Fargo, N. D.	17.9	3	20.9
Huron, S. D.	16.3	4	20.3
Wichita, Kan.	13.8	3	16.8

In S. O. Indiana territory, buyer pays state and city taxes on aviation gasoline, and if he can get a refund from the state, he does so. Kansas City tax of 3c includes 1c city tax.

S. O. LOUISIANA

New Orleans, La.	18	6	24
Nashville, Tenn.	20	7	27
Memphis, Tenn.	19	7	26

2c per gal. discount off above posted retail t.w. prices to dealers and commercial consumers.

CONTINENTAL OIL CO.

Denver, Colo.	11	4	15
Cheyenne, Wyo.	14	4	18
Helena, Mont.	19	5	24
Salt Lake City, Utah.	16.5	4	20.5
Albuquerque, N. M.	16	5	21
Boise, Ida.	19	5	24

S. O. CALIFORNIA

Phoenix, Ariz.	12.5	5	17.5
Los Angeles, Cal.	12	3	15
San Francisco, Cal.	12.5	3	15.5
Reno, Nev.	15.5	4	19.5
Portland, Ore.	13	4	17
Seattle, Wash.	13	5	18
Spokane, Wash.	16.5	5	21.5

Note: 4c per gallon added to t.w. price, in S. O. California territory, to customers taking delivery direct into the fuel tank of planes.

Gasoline Manufacturers

(*Continued from page 74*)

been fairly established that the plant yield basis for the new natural gasoline grading system is economically sound for both buyer and seller, *and if anything, the plant yield ratio basis favors the purchaser.*

"Much has been said of the encroachment on the natural gasoline markets by cracking processes and lately vapor recovery systems. Dire predictions have been the fashion ever since it was ascertained that the conventional 'casinghead' gasoline was not suitable as a motor fuel per se. Still the natural gasoline industry maintains its useful functions and the new grading system is a distinctly progressive step. As a last resort, a safety valve, the very lowest vapor pressure products can be marketed directly as premium motor fuels."

Table No. I

Price Ratios Necessary to Equalize Gasoline Plant Income Under New Grading System

Reid Vapor Pressure of Product	Theoretical	Actual Plant Test 90 Gravity Raw Gasoline
26	1.000	1.000
22	1.129	1.154
18	1.258	1.259
14	1.362	1.331
10	1.471	.....

THE OIL INDUSTRY EXCHANGE

Positions Wanted

REFINERY SUPERINTENDENT desires new connection. Can make lubricating oils and wax, also can run cracking stills. General Superintendent for one company sixteen years. Best of references. Address Box 827.

SALES EXECUTIVE with thorough knowledge of oils; twenty years experience in refining, lubrication engineering and sales management, desires permanent connection. Aggressive. Always produced results. Eastern location preferred. Address Box 777.

EXPERIENCED MARKETER

23 years experience in Oil Marketing business in New York City. Now unemployed through sale of jobbing business of which I was manager. Experienced in accounting, buying and selling. Special experience in Lubes and Gasoline. Moderate salary. Married—easily bonded—Will consider any job. Address "B"—Room 1124.
342 Madison Ave., New York City.

Professional Services

W. S. Barstow & Company
Incorporated
Engineering—Design—Construction
Industrial Plants—Public Utilities
Consultation Invited on Building Projects
120 Wall Street, New York City — **412 Washington Street, Reading, Penna.**

ROYAL E. BURNHAM
Attorney-At-Law
Patent and Trade Mark Practice Exclusively
Continental Trust Building
Washington, D. C.

Miscellaneous

RAIL RATES RISE

Motor transport affords remarkable savings within 150 mile radius of New York, Philadelphia seaboards, Hudson River points, refineries and pipe line terminals in Pennsylvania, New Jersey, New York and Connecticut. Contracts accepted for truck delivery of your entire needs.

Petrol Service
424 E. Drinker St.,
Dunmore, Pa.

WHAT IT COSTS

"For Sale," "Wanted to Buy," "Help Wanted," "Business Opportunities."

"Miscellaneous" classifications, set in type this size without border—10 cents a word. Minimum charge, $3.00.

"Position Wanted"—5 cents a word. Minimum charge $1.00.

Advertisements set in special type or with border—$4.00 per column inch.

Copy must reach us not later than Friday preceding date of issue.

All advertisements carried on this page are payable in advance.

For Rent

WAREHOUSE & OFFICE FOR RENT

All metal building. Concrete floor—truck height. Railroad siding—Brick office building.

Will Rent All or Part

"Oil Capitol of the World"

Write Tulsa, Okla.
P. O. Box 111.

For Sale

WHOLESALE AND RETAIL OIL BUSINESS FOR SALE. Modern bulk plant and service stations included. Within twenty miles down town Detroit. Must be seen to be appreciated. Address Box 826.

BARGAINS
in
GASOLINE TRUCK TRAINS

1931 3½-4 Ton Wichita Truck

Equipped Brown & Lipe 7 speed forward transmission.
Tires 9.75—Dual on rear.
Tank—4 compartment capacity 1654 gallons.
Trailer—Wichita.
Tires—8.25 Dual all round.
Tank—single Compartment capacity 2150 gallons.
Cost $7,100.00 new in March, 1931.
Selling price $3,750.

1930 3½-4 Ton Autocar model SCK

Equipped 4 speed forward transmission.
Tires 9.75 Dual on rear.
Tank—Single compartment capacity 1740 gallons.
Trailer—Pacific.
Tires 8.25 Dual all round.
Tank single compartment capacity 2,335 gallons.
Cost $7,610. new October, 1930.
Selling price $3,000.

Texas trucking laws forces sales of these units. Guarantee first class condition—Pictures on request.

Star Refining & Producing Company
Box 625—Fort Worth, Texas.

Advertisers having box numbers should be addressed in care of National Petroleum News, 1213 West 3rd Street, Cleveland, Ohio, unless otherwise specified.

Standard Oil Stocks on New York Curb Market

1930 High	1930 Low	1931 High	1931 Low	Shares Issued	Par Value	Company	Div. Rate	Period	Last Div. Paid	Transactions Week Ended Jan. 2 Sales Shares	High	Low	Last	Week's Change
25	11¼	16	6	40,000	$25	Borne Scrymser Co.	....		Oct. 15, 30	50	6	6	6	0
69	39⅞	56	30	200,000	50	Buckeye Pipe Line Co.	$1Q		Dec. 15, 31	600	33	†30	31	0
184⅞	100¼	129½	75	120,000	25	Chesebrough Mfg. Co.	††$1Q		Dec. 30, 31	100	80	80	80	+ 5
7⅝	3	3½	1⅝	5,977,873	N.P.	Creole Petroleum Co.	....		.....	11,800	2⅛	1⅞	2	0
65¾	20¼	39	20⅝	30,000	50	Cumberland Pipe Line Co.	....		June 15, 31	.....	....	....	....	....
54¾	26	36	19	50,000	100	Eureka Pipe Line Co.	$1Q		Nov. 2, 31	50	25	21	25	+ 3
6¾	2½	3	1	280,000	N.P.	Galena Oil Corp.	....		.....	.....	....	....	....	....
119	57¼	72	44½	2,974,645	$25	Humble Oil & Ref'g. Co.	50cQ		Jan. 1, 32	4,700	45¼	†44¼	45	— ½
30	15	18½	7⅝	26,557,496	N.P.	Imperial Oil Corp.	12½cQ		Dec. 1, 31	3,800	8¾	7½	8½	+ ⅝
28	15	18	7⅛	.....	N.P.	do registered	12½cQ		Dec. 1, 31	.....	....	....	....	....
41	14½	21⅛	5½	300,000	$10	Indiana Pipe Line Co.	25cQ		Nov. 14, 31	1,300	6½	6¼	6½	+ ¼
24	11⅝	15½	7¾	14,247,088	N.P.	International Petroleum Co.	25cQ		Dec. 15, 31	27,700	9⅞	8½	9¼	+ ¼
22⅜	11½	17½	5	509,000	$12.50	National Transit Co.	25cQ		Dec. 15, 31	1,700	6¾	6⅛	6½	— ⅛
21	10¼	14½	5⅞	100,000	10	New York Transit Co.	††15cQ		Oct. 15, 31	.....	....	....	....	....
54	26¼	35½	20	40,000	50	Northern Pipe Line Co.	$1.50S.A.		Jan. 2, 32	150	31	29¾	31	+ 3⅝
108	100⅝	102⅞	67½	579,465	100	Ohio Oil Co. pfd.	$1.50Q		Dec. 15, 31	100	67½	†67½	67½	— 1½
32	12	15½	5½	400,000	25	Penn Mex. Fuel Co.	50c		Oct. 31, 31	.....	....	....	....	....
33	4⅞	16⅞	3¾	160,000	25	Solar Refining Co.	....		Dec. 20, 29	.....	....	....	....	....
20½	6¾	17	7	100,000	10	Southern Pipe Line Co.	50cQ		Dec. 1, 31	200	7½	7½	7½	— ¼
45⅞	18	23⅞	9¼	1,200,000	25	South Penn Oil Co.	25cQ		Dec. 31, 31	2,200	13	9½	12	+ 2¼
†4	32	42½	25	35,000	50	Southwest Pa. Pipe Lines	$1Q		Dec. 31, 31	.....	....	....	....	....
59⅞	30	38½	13½	16,996,596	25	S. O Indiana	25cQ		Dec. 15, 31	56,800	14¾	†13½	14⅜	+ ¼
40½	18⅞	23⅝	12⅛	2,588,735	10	S. O. Kentucky	40cQ		Dec. 31, 31	6,200	13⅞	†12⅛	13½	+ ½
48⅞	34	36½	16	190,822	25	S. O. Nebraska	50cQ		Dec. 21, 31	700	19	17	17½	+ ½
108½	43¼	62½	23	811,112	25	S. O. Ohio	62½cQ		Jan. 2, 32	500	28	25	28	+ 5¼
....	....	115¼	78½	120,000	100	do 5% pfd.	$1.25Q		Oct. 15, 31	.....	....	....	....	....
10	4	10	1	34,158	25	Swan Finch Oil Corp.	....		Jan. 15, 29	400	1¾	1⅝	1⅝	— ⅛

*New high †New low ††Also extra—Chesebrough $1; N. Y. Transit 10c.

Oil and Royalty Stocks on New York Curb

1930 High	1930 Low	1931 High	1931 Low	Par Value		Transactions Week Ended Jan. 2 Sales Shares	High	Low	Last	Week's Change
4½	½	1¾	¼	N.P.	American Maracaibo	1,800	⅜	¼	⅜	+ ⅛
16¾	4⅝	6½	1⅞	N.P.	Arkansas Nat. Gas	1,700	2⅛	1⅞	2⅛	0
16⅜	4⅜	6¾	1⅞	N.P.	do A	11,700	2⅛	1⅞	2⅛	0
8⅛	6¼	7	3⅞	$10	do pfd.	400	4½	4½	4½	— ⅛
1	¼	1	⅛	N.P.	Atlantic Lobos	1,500	1/16	1/16	1/16	+ 1/16
1½	¼	3¼	¼	$50	do pfd.	.....	....	....	....	....
21	13⅜	16⅞	6¾	N.P.	British American coup.	800	8⅞	8	8⅞	+ 1⅜
....	....	16¾	10	N.P.	do registered	....	....	....	....	....
2¾	⅝	2⅝	¼	$¼	Carib Syndicate	1,900	⅜	¼	⅜	— ⅛
44¼	13⅛	20¾	5	N.P.	Cities Service	64,400	5¾	5¼	5¾	+ 1
93⅞	78¼	84⅝	35⅝	$100	do pfd.	1,400	45½	44	45½	0
9	7¼	7½	4	10	do pref. B	100	4	†4	4	— 1/16
89⅞	80	84	41½	100	do pref. BB	100	43	†41½	41½	— 3
8¼	1⅜	3⅛	¼	N.P.	Colon Oil Corp.	5,600	½	⅜	⅜	0
21	3⅜	7¼	1	N.P.	Col. Oil & Gas. vtc.	8,775	1½	1⅛	1¼	+ ⅛
5⅞	2	2¾	1	$1	Consolidated Royalty	200	1⅛	1⅛	1⅛	+ ⅛
74¾	1¼	3¾	⅜	N.P.	Cosden Oil	1,000	½	†⅜	½	0
70	10¼	15	1	$100	do pfd.	.....	....	....	....	....
1	¼	⅝	1/16	N.P.	Crown Central Petrol.	2,000	⅜	1/16	⅜	+ 1/16
21¾	2½	5	1⅜	N.P.	Darby Petroleum	400	2	†1¾	1¾	— ¼
11	2	6	1¼	N.P.	Derby Oil & Refining	400	2	1¾	1¾	— ¼
60	30	40¼	25	N.P.	do pfd.	.....	....	....	....	....
106⅛	58⅓	76	25⅜	$25	Gulf Oil Corp.	18,400	27	25⅝	26½	0
40⅜	36	9¾	9¾	....	Honolulu Oil Corp.	.....	....	....	....	....
47½	12⅝	16⅞	4¼	N.P.	Indian Ter. Ill'g. Oil A	900	4½	†4¼	4¼	— ⅛
53⅓	12⅝	16⅞	5	N.P.	do B	100	5	†5	5	— ¼
1¾	⅛	⅝	⅛	$5	Intercontinental Petrol.	3,800	1/16	1/16	1/16	0
3	⅞	1⅞	¼	N.P.	Kirby Petroleum	2,000	¼	¼	¼	0
4¾	½	1½	¼	$25	Leonard Oil Devel.	62,500	1/16	¼	¼	0
29	4⅞	6¾	1½	N.P.	Lion Oil Refining	2,700	2⅛	†1½	1⅞	— ⅝
55⅞	19⅝	29	5⅓	N.P.	Lone Star Gas	3,900	8½	7	8½	+ 1¼
31	5½	....	....	$25	MacMillan Petroleum	.....	....	....	....	....
½	⅛	1¼	1/16	$1	Magdalena Syndicate	17,400	⅛	1/16	1/16	— 1/16
16	3	5	1⅞	N.P.	Margay Oil Co.	.....	....	....	....	....
7⅛	1¾	4⅞	1½	N.P.	Mexico-Ohio Oil	.....	....	....	....	....
....	....	8⅞	½	N.P.	Michigan Gas & Oil	1,000	1⅜	†½	½	— 1½
11⅞	2¼	4⅝	⅞	N.P.	Mid. States Pet. A vtc.	7,000	1	⅞	1	+ ⅛
6	⅝	1⅓	¼	N.P.	do B vtc.	1,100	¼	¼	¼	0
36⅓	5	11	⅝	$5	Missouri-Kansas P. L.	2,800	1¼	1	1⅛	0
6	⅛	⅝	⅛	1	do B vtc.	2,600	⅛	⅛	⅛	0
¾	⅛	⅞	⅛	1	Mountain & Gulf	.....	....	....	....	....
12½	3¼	5⅞	2	10	Mountain Producers	1,300	2½	2	2½	+ ½
41⅝	19⅞	26½	9¾	N.P.	National Fuel Gas	1,300	12⅞	11¼	12⅞	+ 1⅛
3½	1⅛	1½	½	$5	New Bradford Oil	100	½	½	½	0
3⅛	2⅛	2⅛	¾	10	New England Fuel	3,900	1½	†¾	¾	— ⅛
16⅞	4	....	....	25	N. Y. Pet. Royalty	.....	....	....	....	....
....	....	6½	6¼	10	N. American Oil	.....	....	....	....	....
11¼	2⅛	3¼	⅝	N.P.	North Central Texas	1,200	⅞	⅝	⅝	— ⅛
4⅛	⅝	2½	¼	N.P.	North European Oil	100	¼	¼	¼	— 1/16
11⅝	3⅛	5	⅜	N.P.	Oilstocks Ltd. A	1,700	¾	†⅜	¾	— ¼
11½	4½	5	2	N.P.	do B	2,500	2	2	2	0
19½	5½	15	3	N.P.	Pacific Western Oil	1,200	4	3⅝	4	0
2½	¼	¾	1/16	N.P.	Pandem Oil	4,600	1/16	1/16	1/16	+ 1/16
4⅜	1	2	⅝	N.P.	Pantepec of Venezuela	1,800	½	⅜	⅜	0
5⅞	½	1⅜	⅛	....	Petroleum Corp war	100	⅛	†⅛	⅛	— ⅛
27½	16¼	19	6	$5	Plymouth Oil	3,200	7	6⅛	6½	— ½
8	3⅛	4½	¼	N.P.	Producers Royalty	55	⅝	½	½	0
99	81¾	83½	15¾	$100	Pure Oil 6% pfd.	.....	....	....	....	....
10½	1½	2½	⅝	N.P.	Red Bank Oil	200	⅝	⅝	⅝	0
5⅜	⅝	2¼	¼	N.P.	Reiter-Foster Oil	1,000	½	⅜	½	+ 1/16
23½	6½	11	¼	$25	Richfield Oil pfd.	100	¼	¼	¼	0
25	2¼	5	1⅜	N.P.	Root Refining pfd.	700	2½	2½	2½	+ ¾
12⅞	5½	3¾	½	$10	Roy. Corp. of Amer. pfd	.....	....	....	....	....
8⅜	2	2⅞	¾	N.P.	Ryan Consolidated	200	⅞	†¾	⅞	— 1/16
2½	⅛	1⅜	⅛	$10	Salt Creek Consol.	4,100	¼	†⅛	⅛	— ⅛
15¼	5¼	3⅞	⅝	10	Salt Creek Producers	2,900	3⅜	2⅞	3¼	0
8	1¾	5¼	1	25	Shreve. El Dorado P.L.	.....	....	....	....	....
17	6	7½	3½	N.P.	Southland Royalty	3,200	3⅝	3½	3½	— ⅛
10	2	5¼	¼	$5	Sunray Oil	22,800	⅜	1/16	⅜	+ 1/16
19⅛	8	12⅞	2½	N.P.	Texon Oil & Land	700	6	5⅛	5⅛	— ⅛
47½	19	24½	9½	$25	Union Oil Associates	500	11½	10¾	11	— 1
4⅜	⅛	1⅞	¼	5	Venezuela Petroleum	8,900	⅜	¼	⅜	+ 1/16
5	2	3½	1¼	1	Woodley Petroleum	500	1¼	1¼	1¼	+ ⅛
2½	⅛	2¼	¼	N.P.	Y Oil & Gas	200	⅜	⅜	⅜	+ ⅛

*New high †New low

Oil Dividends

Awaiting Payment

Jan. 2, 1932

Company and Period	Amount	Payable	Stock of Record
Cities Serv. m	2½c	Feb. 1	Jan. 15
do stock m	½%	Feb. 1	Jan. 15
do pfd. m	50c	Feb. 1	Jan. 15
do pref. B m	5c	Feb. 1	Jan. 15
do pref. BB m	50c	Feb. 1	Jan. 15
McColl Frontenac pfd. q	$1.50	Jan. 15	Dec. 31
Mexican Pet. pfd. q	$2	Jan. 20	Dec. 31
New York Transit q	15c	Jan. 15	Dec. 23
do extra	10c	Jan. 15	Dec. 23
Pan Amer. Pet. q	40c	Jan. 20	Dec. 31
do B q	40c	Jan. 20	Dec. 31
S. O. Ohio pfd. q	$1.25	Jan. 15	Dec. 31

Paid Last Week

Company and Period	Amount	Date Paid
Arkansas Nat. Gas	15c	Jan. 2
British American Oil q	20c	Jan. 2
Chesebrough Mfg. q	$1	Dec. 30
do extra	$1	Dec. 30
Cities Service m	2½c	Jan. 2
do stock m	½%	Jan. 2
do pfd. m	50c	Jan. 2
do pref. B m	5c	Jan. 2
do pref. BB m	50c	Jan. 2
Group No. 1 Oil q	$100	Dec. 31
Humble Oil q	50c	Jan. 1
Lone Star Gas q	22c	Dec. 31
Mountain Producers q	20c	Jan. 2
N. Central Texas pfd. q	$1.62½	Jan. 2
Northern Pipe Line s.a.	$1.50	Jan. 2
Pure Oil 8% pfd. q	$2	Jan. 2
do 6% pfd. q	$1.50	Jan. 2
do 5¼% pfd. q	$1.25	Jan. 2
Plymouth Oil q	25c	Dec. 31
South Penn Oil q	25c	Dec. 31
South West Pa. P. L. q	$1	Dec. 31
S. O. Export pfd. s.a.	$2.50	Dec. 31
S. O. Kentucky q	40c	Dec. 31
S. O. Ohio q	62½c	Jan. 2
The Texas Corp. q	50c	Jan. 1
Texon Oil & Land q	25c	Dec. 31
Tide Water Assoc. pfd. q	$1.50	Jan. 2
Valvoline Oil q	$1.50	Dec. 28
do pfd. q	$2	Jan. 1

New York Curb Bonds

Week Ending Dec. 31, 1931

	High	Low	Last	Change
Cities Serv. 5s '66	42⅜	41	42⅜	+1⅜
Cities Serv. 5s '50	45⅛	42	45	+1⅜
Cities Serv. G. 5½s '42	52	50	51½	+1
Cities Serv. G. P. 6s '43	55½	54⅛	55½	+ ½
Cont. Oil 5¼s '37	80	78⅝	78⅝	—1⅜
Empire O & R 5½s '42	45½	45⅝	45¼	0
Gulf Oil 5s '37	94½	91	94½	+3½
Gulf Oil 5s '47	93	92½	92½	— ¼
Indep. Oil 6s '39	65	60	60	—7
Sun Oil 5s '34	88	88	88	0
Sun Oil 5½s '39	89	87	89	+2
Valvoline Oil 7s '37	76	72	72	—5

OIL STOCKS AND FINANCES

Early Action Expected On Sinclair Merger

ST. LOUIS, Jan. 2.—Action on a merger is expected to be taken early this year by the boards of directors of the Sinclair Consolidated Oil Corp., Prairie Oil & Gas Co., and the Prairie Pipe Line Co., W. S. Fitzpatrick, chairman of Prairie Oil & Gas Co., was quoted in an interview here. Numerous details are yet to be worked out, Mr. Fitzpatrick said, but major obstacles have been removed.

It is likely that a new holding company will be formed and Prairie Oil and Sinclair stock exchange share for share. Fourteen shares of new stock probably would be exchanged for each 10 shares of Prairie Pipe Line stock.

Negotiations with Tide Water Associated Oil Co. and Rio Grande Oil Co. have definitely been dropped.

S. O. Indiana Companies Pare Funded Debts

CHICAGO, Jan. 2.—Standard Oil Co. of Indiana subsidiaries are reported to be paring down their funded debt by buying bonds at current low prices on the open market.

The parent company has no funded indebtedness and never has had any. The following acquired subsidiaries had these oustanding bonds at the end of 1930: Pan American Petroleum & Transport Co. $5,210,000 6 per cent, bonds, due Nov. 1, 1934; Stanolind Crude Oil Purchasing Co. $39,021,000 5½ per cent bonds, due Jan. 1, 1938, and Stanolind Pipe Line Co. $13,174,500 5 per cent bonds due Oct. 1, 1942.

The latter two companies formerly bore the name Sinclair. Standard of Indiana owned a half interest in them and bought the remaining half interest in September, 1930, for $72,500,000 cash.

Financial Notes

Southern Pipe Line Co.—Annual meeting will be held Jan. 27 at Oil City, Pa.

South West Pennsylvania Pipe Lines—Annual meeting will be held Jan. 27 at Oil City, Pa.

Simms Petroleum Co.—Mark W. Potter has been elected director to succeed Arundel Cotter who resigned.

Intercity Has New Vice President

PHILADELPHIA, Jan. 4.—H. A. Vortigern, formerly vice president in charge of sales for 12 years for Sherwood Bros. here, is now in a similar capacity with Intercity Oil Co., 324 N. Broad St., Philadelphia. Mr. Vortigern assumed his new duties Jan. 1.

The Intercity company is one of the large Independent gasoline and oil distributors in the east, having a modern plant on the Schuylkill River with docking facilities for unloading and storage tanks for several hundred thousand gallons of petroleum products.

It also has a laboratory for testing and improving motor fuels and lubricating oils.

Pan Am Expands Abroad Anticipating Tariff

NEW YORK, Jan. 2.—Pan American Petroleum & Transport Co., subsidiary of Standard Oil Co. of Indiana, is building foreign outlets for its Venezuelan crude production and output of its Aruba refinery in anticipation of a tariff on petroleum and its products imported into the United States.

The company recently acquired control of Naphtha Industrie und Tankanlagen Aktiengesellschaft in Germany and previously a half interest in the Petroleum Storage & Finance Corp. of Manchester, England.

Richfield Distributor Sells Out

JAMESTOWN, N. Y., Jan. 4.—The Eaton Oil Co., distributor of products of the Richfield Oil Corp. of New York, has been sold to H. D. Hagadorn, Olean, bulk salesman for Richfield in western New York and northern Pennsylvania.

The Eaton company was a subsidiary of the Superior Refining Co., Warren, Pa.

James Joy, formerly manager for the Eaton company, will continue as manager for the new company, which will be known as the Chautauqua Oil Co.

Hughes Moves Offices

CHICAGO, Dec. 31.—Hughes Oil Co., retail distributors and tank car marketers of fuel and furnace oils, have moved their general offices to the 29th floor of the La Salle-Wacker Bldg., 121 W. Wacker Drive, Chicago. New phone number is Andover 2323.

ADVERTISERS IN THIS ISSUE

This index is published as a convenience to the reader. Every care is taken to make it accurate, but National Petroleum News assumes no responsibility for errors or omissions.

Adamson Mfg. Co. 72
American Flange & Mfg. Co. 8
American Weekly 31
Anderson-Prichard Oil Corp. 2

Berry Sons' Co., Inc., James B. 63
Bethlehem Steel Co. 30
Blackmer Pump Co. 6
Bowser & Co., S. F. ..... Third Cover
Brodie Co., Inc., Ralph N. 3
Bronson & Co., E. B. 55

Carbondale Machine Co. 30
Champion Pneumatic Machinery Co. 44
Cincinnati Ball Crank Co. 75
Classified Advertising 77
Col-Tex Refg. Co. 2
Curtis Pneumatic Machinery Co. 52
Cushing Refg. Co. 48

Daugherty & Son Refg. Co., W. H. 61
Davis Welding & Mfg. Co. ..... Second Cover
De Vilbiss Co. 67

East Texas Refg. Co. 46–47
Empire Oil & Refg. Co. 80
Erie Meter Systems, Inc. ..... Insert
Ethyl Gasoline Corp. 4–5

Franklin Creek Refg. Corp. 61
Freedom Oil Works Co. 51
Fruehauf Trailer Co. 43

General American Tank Car Corp. 29
Gott Mfg. Co., H. P. 30
Granberg Meter Corp. 63
Gulf Refining Co. 72

Kellogg Mfg. Co. 70

Luce Mfg. Co. 55

National Petroleum News 65
National Refg. Co. 45
Neptune Meter Co. ..... Insert
North American Car Corp. 30

Owens-Illinois Glass Co. 72

Periscope Liquid Gauge Co. 45
Pure Oil Co. ..... Fourth Cover

Refiners Marketing Co., Ltd. 70

Sun Shipbuilding & Dry Dock Co. 37
Superior Oil Works 44

Texas Pacific Coal & Oil Co. 1
Tokheim Oil Tank & Pump Co. 7

Universal Oil Products Co. 32–33

Vogt Machine Co., Henry 34

Walworth Co. 3
Wheaton Brass Works, A. W. 27

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